DOCUMENT RESUME

ED 207 756 RC 012 930

AUTHOR	O'Grady, Barbara, Ed.; Levenson, Ruth, Ed.
TITLE	Mobilizing Rural Community Resources for Support and Development of Local Learning Systems in Developing Countries.
INSTITUTION	Academy for Educational Development, Inc., Washington, D.C.
SPONS AGENCY	Agency for International Development (Dept. of State), Washington, D.C.
PUB DATE	Nov 78
CONTRACT	AID-afr-C-1131
NOTE	122p.
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Adult Education; Case Studies; *Community Involvement; *Community Resources; Credit (Finance); Cultural Influences; *Developing Nations; *Educational Development; *Educational Finance; Educational Planning; Educational Radio; Educational Resources; Elementary Secondary Education; Foreign Countries; Government School Relationship; Nonformal Education; Programing (Broadcast); Quality of Life; *Rural Areas; Shared Facilities; Social Influences; Systems Development; Technical Assistance; Vocational Education
IDENTIFIERS	*Community Based Education

ABSTRACT

Focusing on how local village communities in developing countries might support part or all of their educational costs, this study describes methods used by developing countries to reduce education costs and offers a model incorporating several of the most successful components of such projects. First is a discussion of methods used by governments to reduce education costs, including salary freezes, lotteries, and patriotic service alternatives. A description of methods designed to provide local support of education examines community projects which incorporate traditionally-used techniques into the formal school, maximize use of school facilities and personnel, and introduce technology such as radio. A comprehensive model based on the more successful community projects, is offered with a list of appropriate social criteria whose presence is necessary: a traditional structure of communal self-help; presence of a convincing/charismatic leader; outside intervention such as capital loan funds, technical assistance and training. The model includes communal construction of educational facilities, external loan funds, home tutors and instructional supervisors, support by radio-based instructional materials, commitments to specific income-generating tasks by students and parents for school support, community project management and training, and technical assistance from national sources. Appendices contain project case studies and summaries and other related information. (CM)

ED207756

OCT 1981
RECEIVED
ERIC/CRESS

Mobilizing Rural Community Resources for Support and Development of Local Learning Systems in Developing Countries

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Academy for Educational Development
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

RC 012930

AED

Academy for Educational Development, Inc.

OCT 1981
RECEIVED
ERIC/CRESS

Mobilizing Rural Community Resources for Support and Development of Local Learning Systems in Developing Countries

Allan Kulakow, Project Director

Judith Brace, Research Associate

James Morrill, Research Assistant

Barbara O'Grady and Ruth Levenson } Technical Editors

November 1978

This report was funded by the United States Agency for International Development, Contract # AID/afr-C-1131, work order 42.

Table of Contents

	Page
Introduction	1
I. Community-Level Projects	7
II. Radio and Local Education	27
III. Considerations and Recommendations	30
Intervention	35
Constraints to Transferability	37
Governments	38
Inter-System Problems	41
A Comprehensive Model	41
Appendices	
A. Project Case Studies	44
B. Project Summaries	76
C. Profiles of Three Radio Schools	91
D. Illustration: Barrio School Project	99
E. "For African Children..." by A. Babs Fafunwa	101
F. Description of Credit Union Self-Financing Service System	108
Bibliography	112

MOBILIZING RURAL COMMUNITY RESOURCES FOR SUPPORT AND DEVELOPMENT OF LOCAL LEARNING SYSTEMS IN DEVELOPING COUNTRIES

Introduction

Faced with a growing demand for primary education, many developing countries have concluded that their national education spending has reached maximum levels; as a result, they have sought to reduce this strain on their national budgets in several ways.

- Policies have been developed on a national level that seek to reduce recurrent educational costs "unilaterally" without extensive coordination at the village level.
- Traditional cost-reducing changes have been incorporated into the formal educational structure, and new, less expensive educational systems have been introduced.
- Methods to increase personal and community income and initiatives have been sought to enable villages to provide their own support of local education.

At the national level governments can avail themselves of several options aimed at reducing recurrent educational costs. Two such options considered in the past in Sri Lanka, for example, are increasing the ratio of students to teachers and freezing teachers' salaries. The Institut de Recherche sur l'Economie de l'Éducation of the University of Dijon has suggested a salary scale that would index teachers' salaries to no more than twice the per capita income of the country. Adherence to such a scale would eliminate the situation in the Ivory Coast, for example, where salaries are currently 10 times the per capita income, five times higher than the recommendation of the Institut.

Iran and Madagascar have experimented with the idea of including teaching in compulsory national service programs. In Iran, secondary school graduates are given the option of joining an Education Corps instead of serving an obligatory tour in the military. After six months of training, they teach school in rural areas; in return for the government teachers, villagers are expected to make a "massive contribution" to school construction. The cost of educating a pupil in an Education Corps school is 72 percent less than in the usual school system. In Madagascar, graduates are expected to serve up to two years of largely voluntary service in any of several fields, one of which is education. Since they receive little in monetary compensation, government costs are limited largely to their training.

Another means of subsidizing education is a national lottery, already used in many countries to increase state revenues. A lottery supports the social security system in Mexico, for example, and the education system in New York and New Jersey.

But what seems to be a longer-range and more deeply-rooted alternative to current budgetary problems is found at the community level, in alternative educational systems and methodology and in integrated programs aimed at increasing the supportive capacity of the community itself.

Since nonformal education is increasingly being seen in the developing nations as an indigenous, more practical, and less expensive alternative to formal, colonial education, its methods are being applied to formal systems. In the Proyek Damong programs in Indonesia, the Barrio high schools in the Philippines, the Kwamsisi experiments in Tanzania and other projects, it has been asserted that nonformal techniques have improved the quality of education and have at least the potential of reducing its costs.

At the same time, nonformal programs have also experimented with alternative delivery methods, both traditional and technical, and have been used productively to reduce costs in the formal sector: for example, peer-teaching techniques in the Ivory Coast, Indonesia, and the Philippines, and the introduction of radio classes to further extension efforts in Ethiopia and to teach mathematics in Nicaragua.

Vocational training is another educational alternative that can result in at least partially defrayed costs. Vocational program participants are often able to construct and maintain their own facilities, thereby reducing capital costs. Such programs provide services that will reduce recurrent expenditures. Vocational programs, such as the Botswana Brigades and the Village Polytechnics in Kenya, have successfully involved the community.

Even in non-vocational programs, student production in either gardens or workshops can offset some material costs. While these programs are unable to effect a significant reduction in capital or recurrent costs, they can act as a partial solution to minimizing educational costs, at least for the students themselves.

Finally, efforts have been made in many countries to increase personal and communal income which can then be used to defray educational costs. These efforts have all been based on the idea of communities mobilizing for their own benefit.

For any of these alternatives to be successful, decentralization must be considered. Different degrees of decentralization have been tried, on both a regional and national level. The more successful emphasize local contribution to the planning process and recognize existing social and cultural sturctures that can facilitate acceptance and communication of the development schemes. Many of these projects, such as the Korean Mothers' Club, involve a cooperative or communal project that produces funds which can provide direct or indirect support to local students or schools.

In many cases, utilizing local resources means working within the traditional framework of self-help. In some areas,like Indonesia with its tradition of gotong royong, the traditional contribution of service to the community government and local mobilization efforts have been coordinated successfully. In the case of the Harambee movement in Kenya, however, government attempts to channel the efforts have been less successful.

Self-help, or communal participation programs, can make a significant contribution to life in traditional rural communities. Although many villagers often look to the national government as the only appropriate source of funds for education, many communities throughout the developing world have used their own resources and initiatives to provide educational opportunities for their children.

In addition to the concept of self-help, the traditional village educational systems are also an important consideration. Increasingly, African pedagogues are arguing for renewed interest in these educational resources. Africans today are feeling sufficient self-respect so that now they can look back on the rich possibilities for education that have always existed in traditional life. They maintain that the educational systems inherited from the Europeans fail to provide the kind of framework that Africans need for their world. Traditional African education is more nonformal than not; community and family interaction, cultural apprenticeship, and practical knowledge are all part of it. While few African educators are urging the complete abandonment of the European system, many are urging a combination of the new with the old in order to maintain cultural integrity and transmission of traditional values. Another advantage to preserving the traditional African system is that its methods can reduce the costs of the formal system.

What, then, are the possibilities of merging the traditional educational experience with modern Westernized school programs? How can the members of a community participate in the total educational process of that community? The French colonial tradition determined that African children, unlike their advantaged continental cousins, had l'esprit vierge, and would require six years of primary education instead of five. Perhaps the reconsideration of indigenous educational resources could modernize that concept. If even limited "training" could be provided to prepare villagers to be "home tutors," if radio, for example, could be used to bring content as well as methodology to support local educational monitors, is it not possible that more educational opportunities could become available to more children (and adults) without increasing budgets?

In Bolivia, for example, pre-school education has been provided by older siblings and older villagers in areas roped off in the village square. In Senegal pre-school nurseries were set up in the early 1960s to provide help to mothers and bring health, sanitation, and other life-skills education to the parents.

The question of pre-school education as a preparation for primary school should be studied more thoroughly than time permitted in this study. How could pre-school programs, for example, help reduce the length of primary school years? How can local villagers, including the siblings who normally watch over the younger children, be used, as in Bolivia, to gather and teach children? Seen as part of the educational reform movement in Africa, the pre-school program could be a focus deserving of consideration. A survey of pre-school education practices and experiences and the traditional sources of such experiences that, for example, Dr. A. Babs Fafunwa* discusses might contribute to a better understanding of how the local community could participate in educating children.

* See Appendix E for additional information.

This study focuses on the question of how local communities might support part or all of the educational costs. Many of the examples of community support come from so-called nonformal education, vocational, or skill-oriented training, and from adult education. Although this study treats mainly secondary and vocational education, we believe that the same strategies developed to enrich education in the communities cited are relevant to primary education programs as well.

I. Community-Level Projects

One approach to reducing education costs beyond governmental imposition of salary freezes, lotteries, or patriotic service alternatives is the introduction of more economical educational systems. This can be done by incorporating traditionally used techniques into the formal school, maximizing the use of both school facilities and personnel,and introducing technology such as radio.

One application of traditional education is the use of temples or religious schools as learning centers. In southeastern Asia, for example, Buddhist temples in Laos and Koranic schools in Malaysia are being used as early learning centers for children until government schools become economically feasible. Koranic schools have also been used in this way in Nigeria and could be used similarly in other Islamic countries of Africa. Literacy and numeracy courses taught in these schools by the religious teachers (or at home by mothers with special training) could reduce the dropout rate among early primary students.

Another technique that might be fused into educational systems is peer-teaching, a technique used in IMPACT programs in Indonesia, the Philippines, Malaysia, and now being extended to Liberia and Jamaica. Peer-teaching results in cost saving by limiting the number of teachers and using upper-primary students as tutors for younger students. The IMPACT projects have also attempted to enlist "home tutors," students to teach their younger siblings, although that part of the project so far has met with limited success because of an apparent lack of adequate "rewards" to the tutors. Peer-tutoring has also been experimented with in the Ivory Coast, in teacher- training programs.

Education costs have also been reduced by using material and human resources as efficiently as possible. In Zambia, for instance, double class sessions have been introduced to allow more efficient use of classroom space. With classes split into morning and afternoon sessions, teachers can still work their "normal"

day and instruct twice as many students. This program, however, may not be transferable to countries that have a lower school enrollment than Zambia. Some countries in the Sahel, for instance, have low population densities and relatively low school enrollment, and, therefore, may not always have enough students to fill the extra sessions.

Another cost-effective technique is to share existing facilities with both primary and secondary levels. In Botswana, for instance, educational facilities are shared by secondary students in formal education programs and members of the "Brigades," students in a nonformal program who receive on-the-job training in 20 different skills. This arrangement has the added advantage of allowing the income the Brigades earn from contract work to go towards covering the costs of the regular school as well.

An extension of this concept is the sharing of facilities with the local community, as is being done in the IMPACT programs, in which primary schools have been renamed "community learning centers." This sharing implies a certain amount of community participation in nonformal education, since facilities could also be used for adult education centers or for other community purposes. The centers now house libraries of instructional modules and serve as testing centers. (Most actual instruction is done in outdoor "kiosks," indigenously constructed shelters for individual or group study.)

In the IMPACT programs, as well as in others such as the Philippine Barrio Schools, Botswana Brigades, Tanzania's Kwamsisi schools, and Ethiopia's Ogaden experiments, the students are taught to maintain the school and its grounds, thus reducing important recurrent costs. IMPACT introduced other money-saving innovations as well. The program relies on self-learning through self-contained learning modules, home tutoring by older students, and peer-teaching. Because of

the modules and peer-teaching, students are largely self-directed and, therefore, require fewer teachers than usual. Educational costs are thus reduced. In the five Philippine barrios where the project has been introduced, the cost of employing the 55 teachers normally required is 264,000 pesos. (Textbooks are extra.) Under IMPACT, the cost for 12 instructional supervisors, five aides, and the modules is 227,000 pesos. Despite high initial costs for the production of the modules, they are less expensive to reproduce and distribute. IMPACT has been criticized because it results in fewer teachers in a country which needs labor-intensive programs. Its supporters, however, claim that IMPACT only stablizes the current number of teachers while allowing the education of many more students.

Like modules, other technologies can help reduce educational costs. One of the more promising seems to be radio which has been successfully utilized to teach mathematics in Nicaragua or to aid in extension education in Ethiopia. The four-year Radio Mathematics project*, for example, not only helped reduce costs but also resulted in an increase of up to 60 percent in the amount of mathematics learned and a reduction of nearly 50 percent in the number of students who have had to repeat the grades. Elsewhere, radio has been used to provide correspondence courses at higher levels of education as well.

Television, although controversial, is also being considered as a potential cost-saving technology. In the Ivory Coast, it is hoped that television can be combined with peer-teaching to offset some costs and make education more interesting, thus reducing the dropout rate. More importantly, like radio, television can provide quality instructional material to a mass audience.

An important consideration in the shift to nonformal education and the introduction of nonformal techniques is the need to make learning more relevant to the community, and, through the community, to the nation as a whole. Developing nations face problems of unemployment while often lacking enough skilled manpower to support development.

*Funded by AID and assisted by the Institute for Mathematical Studies in The Social Sciences at Stanford University.

As a result of these considerations, there has been an increased emphasis on vocational and other "practical" training that can be combined with a formal curriculum. As much as possible in these programs, agricultural and other vocational skills are used for revenue-producing projects to help the communities. By combining the practical and the academic, a certain measure of cost recovery can be effected, as is the case in the Botswana Brigades.

The Brigades are a vocational education experiment that began as a response to the early-school dropout problem that was particularly acute in Botswana since the nation had no secondary schools until the mid-1960s. An original Builders' Brigade led to the creation of several others in agriculture, engineering, and other specialized areas. While all the Brigades aim at recovering a substantial portion of their own costs, some, like the Builders'Brigades, have been more successful in this attempt than others.

The skills the Brigade members learn are enhanced by practical training on jobs contracted within their communities. In addition, they spend one day a week in academic and development studies that are made as relevant as possible to their own lives in the communities. One reason, it seems, for the success of some of the Brigades in teaching skills and recovering costs is their relatively high degree of local autonomy and flexibility. They are only loosely coordinated by the national government; daily administration and contractual responsibility lie in the hands of a "community trust," composed of villagers elected or appointed to the position. Nonetheless, the Brigades have problems common to other vocational programs (and which should be dealt with when one is considering the transferability of such a program.) One dilemma is finding the adequate balance between academic subjects and practical skills, a problem exacerbated among the Brigades by the emphasis that has been placed on cost-recovery. At the same time, there is the

problem of the "respectability" of vocational and agriculture training in African eyes that have been conditioned to see education only in terms of formal classrooms.

This same bias has also hampered local support of vocational education in Kenya. In a country where Harambee has been responsible for the construction of hundreds of formal schools, efforts have been harnessed only relatively recently for the establishment of a vocational school, the Kiambu Institute. At Kiambu, unlike in most Harambee projects, the mobilizing initiative came from the government. The Kiambu Institute, unlike Harambee, also received some outside financial support. In terms of recurrent costs, the Institute hopes to recoup a portion from its coffee farm and workshops and so supplement government and foreign grants.

A system of vocational training in Kenya that has not received much direct aid from the government, but which has been able to cover some of its recurrent costs through production, is the Village Polytechnics (VPs). The VPs include 175 communities in their program of providing essential skills at the village level. Most of the schools are located on church or government land and have been constructed with student help, largely through the initiative of the National Christian Council of Kenya (NCCK), which covers about one-half of the schools' budgets. The VPs have also been able to rely on local contracts for fiscal support; one school was able to meet 28 percent of its budgetary needs this way.

However, VPs have not been able to secure the local support that Harambee schools have had in the past because vocational skills do not have the prestige or the credibility of a formal curriculum. Harambee itself began earlier in the century in response to the attempts of the colonizers to establish a vocational system which the villagers interpreted as an effort to circumvent their access to formalized education. Thus, with the help of missionaries, they began instead to construct formal schools of their own. Furthermore, Harambee schools traditionally

are generated from the needs of the community itself. Because the VPs are established through the initiative of an outside organization--the NCCK--local self-help initiative may not be as strong.

The vocational schools, because they rely on self-help of students to defray capital costs, and production for deferral of recurrent costs, are able to keep their expenditures lower than those of formal schools. There is also lower overhead in the Polytechnics, which keeps costs to $70 per pupil as opposed to $130-$150 per pupil in the formal secondary school system. Also, the percentage of recurrent costs for teachers' salaries is lower, since most VPs have small staffs of approximately three teachers.

The VPs offer two-year courses that do not aim at formal certification. The schools try to maintain as many ties to the community as possible by keeping production limited to locally-needed services and products. In fact, newer VPs have placed less emphasis on formal classes, in an effort to seek more community involvement and become more effective at cost-lowering.

The VPs, like the Brigades in Botswana, are largely autonomous, and thus far there has been little in the way of government efforts to exercise control over the schools; what coordination there is has been done largely through NCCK.

Several other projects have incorporated the idea of production into formal primary and secondary curricula. One of the most successful is the Barrio High School program in the Philippines, a project which tries to combine vocational and nonformal education in a formal framework. What began with three schools in 1964 under the leadership of Pedro Orata to extend secondary education into rural areas has expanded to over 1500 Barrio schools 10 years later.

Like other such production-oriented programs, the Barrio schools rely on community involvement to increase the revenue of both students and their parents to

support the schools. Classes are held largely in primary school buildings and are supported by fees paid by the students. At least one Barrio school covered 80 percent of its operating budget through such fees.

The philosophy behind the Barrio schools has been to mobilize both the students and their parents to undertake a variety of projects to help them cover the cost of their education. In fact, they must sign agreements to take on tasks that are income-generating. Project activities include fiestas, raffles, movies, and shows for the community. The schools are also supported by an agricultural tax on local production and by contributions from individuals and groups.

Project work includes that done by the students in "home projects," small cottage industries (making jars, tiles, etc.), and gardening. Students also take part in a project to raise piglets. The first piglet is donated by the school or an outside donor, raised by the student, and then sold. With the profit from the sale, the student fulfills a contractual agreement by paying his school fees, buying another pig, and giving any remaining money to the school.

Local governments have cooperated with the Barrio high schools; provincial and city governments have allocated part of their public works budgets for student labor. Barrio governments have also assisted by allocating a portion of property taxes for school support (50 percent of the 10 percent share of the Barrio real estate tax paid by the Barrio people--less than five percent of the total school budget). In addition, farmers hire students at harvest time. With the money they earn in these endeavors, students can pay for school fees. In addition to helping raise money, the project students try to teach their parents new agricultural techniques that can improve crop production.

The nature of the program apparently has increased student motivation as well as production. While the time actually spent in classrooms has been reduced, test scores have gone up. The program has also resulted in a reduction of the early-primary school dropout rate by providing a system in which the students can continue their education.

However, because Barrio high schools put so much reliance on school fees, it is difficult to pay teachers' salaries and other expenses on a regular basis. There is, perhaps, an over-reliance on fees as a means of support. While there is some limited multi-level governmental financial support, it is not enough to absorb a significant amount of the costs of the program.

Similar efforts at integration of the school into the community have been found in the Tanzanian village of Kwamsisi. There, in the framework of Ujamaa,* the national government administers the schools, pays the teachers' salaries, and provides books and equipment while at the same time the community exercises a large degree of control. (The Ministry of National Education in Tanzania has been careful to ensure that community development projects are initiated at the local level, keeping their input into them as indirect as possible.)

Students at the Kwamsisi school perform a variety of self-help projects that help not only the school but also the community. In return, local labor is employed in the support and maintenance of the school, students are better clothed at village expense, and the health and nutrition of the community are better than those of other villages. The school itself has become a community center.

---

*A decentralization movement designed to devolve authority into regional and local governments.

The students' community activities are part of the Community Studies portion of the curriculum, which combines elements of nonformal education with a formal curriculum of literacy and numeracy, citizenship (through TANU philosophy*), and cultural activities.

Self-help projects are in effect in other parts of Africa as well. At the elementary school level, educational expenses have been offset by the sale of products from school gardens. In Rwanda, for instance, pilot projects have been initiated with experimental gardens using traditional methods, organic fertilizers, and more modern methods of fertilizing. In a school that had only one small plot, eight-and nine year-old students were able to grow $120.00 worth of potatoes and use the profits -- six times what the school usually received--for equipment.

Gardens are also used in many other countries to help defray the costs of education. In Upper Volta, the government has established a three-year program of basic education for rural youth who never had a primary school education. Each of the centers maintains a demonstration farm with crops and livestock, with some of the classes taught by extension agents. Largely because of their own agricultural production, the average annual costs are less than half those of a regular primary school.

Another ambitious plan to reduce expenditures while increasing community involvement is being attempted in Papau, New Guinea. There, the present two-tiered system will be expanded to include "community schools" which will act

---

*The Tanzanian African National Union, a political party.

as resource centers for literacy-training classes for both children and adults. The project will use secondary students and more mature school leavers as tutors. In addition, it will use the media--primarily radio--more extensively in an attempt to provide continuing education for the large number of early school leavers.

A more extensive production program has evolved from a 1956 experiment in Mitraniketan, in the Kerala State of India. Work experiments have been integrated into the primary and secondary school structures. Younger students are involved in small maintenance tasks around the school, while the older students take part in agricultural training and production on 40 of the school's 55 acres. The agricultural training revolves around poultry and dairy farming as well as crop production.

There are also technical workshops at Mitraniketan that offer training in carpeting, simple tool production, spinning, weaving, tailoring, and baking. The income generated by the sale of products is pooled by the students and spent on school-related purposes.

The foregoing projects all focus on <u>immediate</u> financial solutions for supportin school systems. However, much interest has also focused on the more <u>long-term</u> solutions, that is, increasing the total individual income at the community level while simultaneously increasing involvement with community schools and education

in general. Thus, not only is villagers' ability to support costs improved, but also their willingness to direct the money into education.

While raising individual or group income does not ensure that the income will be used solely to defray school costs, income-generating projects can create spin-off funds that can benefit the community as a whole and the school in particular. Several projects have taken this approach to "indirect" school aid.

In Korea, for example, the Mothers' Club in Oryu Li started as a cooperative venture that succeeded in building up the individual savings of its members. Part of the money was to be used for paying the children's school fees. By the same token, higher incomes for members of the larger Kaira milk cooperative in India meant that the cooperative itself could invest in area projects, including the support of primary schools. Similar revenue-raising projects have benefitted education in many countries including Bangladesh (the Comilla project), the Philippines (the Barrio high schools), and Indonesia (Banjenagara).

But without concomitant emphasis on the value of education, increased revenues do not guarantee the support of the community school. With cooperative funds, for example, there may be a tendency to re-invest any profit in the project itself rather than in the community. Furthermore, higher personal income may be concealed in order to prevent its spin-off into the tax collector's cache.

But the idea of improving the ability of a community to support its local educational facilities is sound in terms of providing some measure of support for both capital and recurrent costs. Efforts that seek to raise community income can be initiated at either the local or regional level. However, local initiative has often been stymied by bureaucratic interference. This has been one of the problems in coordinating the Harambee movement in Kenya. Local desire to build a community school diminished when villagers were told exactly how, with what motives, and even with what materials the school should be built.

As a result, some governments have attempted to decentralize their structures to allow for more autonomy at the local level in the belief that development is best effected through the involvement of those affected. The longest standing decentralization effort is probably that of Tanzania, with its Ujamaa program. That movement, which has attempted to devolve authority into regional and local governments while retaining some degree of central coordination, has met with the limited success of most early experiments in social transformation. The education program in Kwamsisi, for example, involves a significant amount of interaction between the village school and the community, with apparently positive results for both.

Another proposal for wide decentralization is the Rural Development Program in Egypt. Under the program, which is administered by the Egyptian development agency, ORDEV, with a significant amount of funding from AID, rural Egyptian villages would have increased access to low-interest loans for area development managed by local village councils.

Decentralization on a smaller scale has been attempted in Senegal, where 30 rural communities were created on a regional level. There, locally elected councils determined the developmental efforts of the community. To fund the efforts, the villages were able to keep 75 percent of their taxes, which had formerly all gone into government coffers in Dakar. These funds were to be invested only in the capital costs of new development; operational costs were to be borne by the central government. As a result, new cooperatives were established, wells dug, and gardens planted.

Decentralization aims at nationwide development through an alliance of national goals with local initiative and resources. The focus can be on either specific goals or overall development in integrated programs. There is often a thin line between the two, as seen in the Indonesia health insurance project in

the Banjenagara region.

There, through the mobilizing efforts of doctors in the regional department of health, villagers were asked to make voluntary contributions to a special fund called dena sahat, which evolved into a sort of credit union and was used to pay for medical supplies and equipment. A member of the health department acts as a catalyst to spur village discussion of local problems and find possible solutions. The concept and the spirit of the dena sahat have been applied toward improving other services in the community, such as local schools.

The Banjenagara experiment has succeeded in incorporating changes within a cultural and historic context. One element of the project's success is its ability to respect, and take advantage of, the local tradition of gotong royong, or individual labor for community goals. The concern for such traditions is a hallmark of other successful local projects as well. In the Philippines, the tradition is called tangnawa; in Sri Lanka, hramadana. In those countries, the tradition has been useful in mobilization efforts: in the Philippines on a local level and in Sri Lanka on a national level.

In Kenya, a similar self-help tradition grew out of opposition to British attempts earlier in this century to establish schools with a more rural orientation. Kenyans saw these attempts as an obstacle to their advancement and eventual unification, and, in opposition, began the Harambee movement, a more formal school system. The Harambee movement not only gave its name as the national motto, but also contributed to the construction of hundreds of primary and secondary schools in the country. But the problem of unifying national development and local self-help is seen clearly in the context of the Harambee situation. The parochialism that gave birth to the first Harambee schools has also made national attempts at coordination very difficult. This historic antagonism against central control seems to be a major reason why self-help efforts have been more difficult to

coordinate in Kenya than in Indonesia or the Philippines.

The use of local self-help initiatives is one way to ensure community-wide acceptance of local development projects and to introduce radical changes while respecting traditional social organizations. In the Korean village of Oryu Li, for example, local development began with the organization of the Mothers' Club by the Planned Parenthood Federation. Based on the traditional organization of the village women, the club began not only a program of family planning, but also a communal bank--all through earnings from making and selling uni to a local school. From their original savings, the club was able to pool enough money for other projects, including the purchase of loans and ultimately of farm land near the village. The savings were also used for school fees.

One of the reasons for the success of the club in Oryu Li was the dynamic leadership of one woman--Mrs. Chung. After assuming leadership of the club early in its existence, Mrs. Chung was able to mobilize the energies of the town's women in various cooperative projects. She was also instrumental in forming a young men's club in the village.

The personality of Mrs. Chung cannot be underestimated in considering the amount of change that her organization effected. Once, when capital was badly needed to rebuild the members' kitchens, Mrs. Chung went so far as to convince the other women to pawn their wedding rings for the needed money. Her tact and ability to compromise were also crucial in conditioning the men of the village--who were accustomed to more passive women--to accept the club, its activities, and the change that it represented.

Just as Mrs. Chung was crucial to the success of the Mothers' Club, equally effective projects in other countries have also been marked by the presence of dynamic agents who bring innovations to the traditional structures.

In the Comilla project in Bangladesh, for example, Dr. Akktar Khan was instrumental in making the project work. A respected educator, he was able to cooperate with many levels of bureaucracy and dampen rivalries among different government agencies. In the Philippines, Dr. Orata established the first Barrio schools in his own village in an attempt to solve the primary-school dropout problem. And in Botswana, Patrick van Rensburg, an expatriate South African, who engineered the establishment of the first secondary school in Swaneng Hill, conceived the idea of the Botswana Brigades.

However, although dynamic and innovative leaders are important, projects will not succeed without strong support from the community--especially financial support. One example of strong community structure that has contributed to active school support is found among the Ibos of Nigeria.

While the greatest percentage of school expenditure in Nigeria comes from public funds, the balance is made up by what is known as the "Assumed Local Contribution" (ALC). Although in many cases this is paid from school fees, some villagers raise the money collectively. One such village is Okoko-Item.

In Okoko-Item, the village Improvement Union charged with raising the money for the ALC goes about its task in one of several ways. Sometimes the total amount is divided by assessments to different age groups; other times it is collected by a head tax on all the adults in the village. At another time the crop of the palm groves of some villagers may be set aside for a specified period of time and sold to raise the money.

In addition, villagers who have left the area are also taxed, and usually at a higher rate than those who have stayed. If villagers are too poor to afford their share of assessments by the Improvement Union, they can offer their labor as an alternative. This idea is not restricted to Iboland. Other communities have also relied on alumni who have taken up residence elsewhere. Some Malaysian

schools have depended on the "old boy networks" of their older, longer-established schools. However, in an African context, this would have to be based on the maintenance of ties to the village itself rather than to the school as an institution.

Another example of a mobilization effort that channels community support to local education is in Tamil Nadu, India. There, communities have been actively engaged in school improvement projects since 1950, when villagers began a program which offers free lunches to poor children. A year later, the state government recognized the value of the local contributions and extended the scope of the project to include other kinds of activities beneficial to the schools.

The state government has since become the catalyst in spurring continued support, providing channels of communication between local villagers and teachers and between teacher associations in different villages. It sparks village awareness of school problems through informal public meetings and regional conferences. Ideas and inspirations are then circulated through the state and serve as sources of information-sharing among teachers.

The teachers' interest in community involvement is ensured by the fact that they are among the prime beneficiaries of school improvements--often better facilities and improved equipment. Moreover, teachers are said to be motivated by state "awards" that recognize their contributions to the development efforts and by periodic inspection visits by government officials.

Inducements to the education department workers who act as catalysts in mustering local support depend on "their faith in the utility of the programs" in creating better schools. In terms of community incentive, observers believe that the people have a basic appreciation of the value of a good education and, through the efforts of the education department, of the need to provide some material support to the schools themselves. Again, in considering the trans-

ferability of the Tamil Nadu Model, it should be emphasized that the success of the project lies in this awareness of the necessity of local school support. It should be noted that the mobilization efforts of the people of the Indian state have resulted in only partial reduction of capital costs (for equipment outlay) and little in alleviation of recurrent cost problems.

Most of the successful revenue-raising programs at the village-level seem to revolve around the idea of a cooperative whose strength lies in its ability to generate communal income, its weakness--from an educational support standpoint--in the possible reversion of the profit back into the project itself. But many cooperatives have tended to include in their goals a measure of community development. To be worthwhile in terms of the ability to cover recurrent costs, funds would have to be regular and substantial. In terms of smaller capital costs, however, the effect of small cooperative profits can be useful.

One example of a cooperative effort that can apply some funds to school assistance is the Lentawe La Oodi weavers' project in Botswana. Initiated by Swedes in 1973, the small industry employs around 50 women who are all considered co-owners of the factory. All jobs in the factory are rotated among all the women. Wages depend on production, and quotas are one incentive to high production. The profits from the factory are used to contribute to projects such as a loan agency that helps fund local programs. Because weaving is not a traditional craft in the area, the needed technology had to be imported, along with the Swedish advisors. Similar projects might prove more successful in Africa if they were based on traditional handicrafts. In any such attempts, however, it should be realized that a market for the goods to be produced is also a prerequisite for success.

In another instance, German volunteers working in a fishing village near Cape Coast in Ghana began a carpentry shop and toy repair service as part of a vocational training program for young Ghanians. The project also has taught

some innovative fishing methods to local fishermen. Together, the projects have produced enough money to be channeled into local development projects.

On a larger scale is the dairy cooperative in the Kaira district of India, which has 250,000 people in over 800 member co-ops. Based on the milk-producing cooperatives in the district, this project represents an example of complementing village initiatives with modern management and improved technology. First begun nearly 30 years ago, the Kaira dairy cooperative has since become one of the largest industries in India. The significant fact about the Kaira cooperative is that it has also done much to further rural development.

The members of the co-op are generally the rural poor; in fact, a quarter are landless peasants. However, the income of these people, who own on the average of two cows, has grown to double that of milk producers who do not belong to the cooperative. In addition, profits have gone back not only into the production and distribution of the dairy products, but also into village development projects, including the construction of primary and secondary schools.

In an effort to duplicate the success of Kaira, the Indian government established the National Dairy Development Board (NDDB). So far, however, the NDDB has met with only limited success in this effort. One possible reason is that Kaira owed much to the organizational and managerial skills of a man called the "guiding force" of the cooperative, Dr. Verghese Kurien.

The problems faced by the Indian government in trying to replicate Kaira were also felt in the Comilla project in neighboring Bangladesh. In 1959, the project began as an experiment in integrated development under the leadership of Dr. Ahktar Khan. The project in the Comilla district of Bangladesh, in particular in the Kotwali thana ("region"), included a variety of model programs instituted by the country's Academy for Rural Development. The program centered

around the creation of agricultural cooperatives that benefited rural peasants. For the peasants, the cooperatives represented the availability of credit to pay debts and purchase new implements. Credit was made available, not to individual farmers, but to groups of farmers through the cooperative federation, a body made up of representatives from both government agencies and peasant cooperatives. The federation approved loans to the village cooperatives on the condition that if the loans were not repaid, the co-op would not be eligible for similar loans in the future. This method ensured that peer pressure would force individual members of the cooperative to pay back loans to guarantee the credit rating of the group.

The cooperatives also became the link between government and the villagers. One member of each co-op--a "model farmer"--was selected to receive technological input from governmental agricultural officials. The farmer, in turn, would go back to his village to convey the information to the neighbors. In return, weekly meetings provided a source of feedback to the extension agents that was valuable in helping them be more effective teachers. Their flexibility was important to the project's early successes, as was Dr. Khan's ability to effect harmony among the government agencies involved.

As part of their integrative framework, the co-ops made several attempts at supporting the schools in their village. There were "feeder" programs that used local religious teachers and qualified women to teach in places where primary schools did not exist. It was thought that preparing younger children for school would reduce the repeater as well as the dropout rate. That part of the project, though, was said to have met with only "limited success." Another component of the project was a school works program that tried to combine new school construction with higher teacher salaries and the establishment of school

boards as part of local governments. After a two-year experiment with this in Comilla, the national department of education in East Pakistan found the program unacceptable.

II. RADIO AND LOCAL EDUCATION

Radio as a vehicle for instruction is receiving renewed attention because of the increased demand for primary and adult education, increased availability of inexpensive radios, the realization that the radio can contribute to national integration, and the recent successes in the use of radio to provide quality instruction.

The Radio Mathematics project in Nicaragua is perhaps one of the better examples of the application of radio to improve instruction, given limited skills and education of the teachers, overcrowded classrooms, and a scarcity of funds for educational materials. Interestingly, it is the enjoyment of a new learning situation -- radio and the liveliness that it brings to the classroom -- that seems to account for a renewed general interest in learning. The programs are filled with songs and opportunities for active group participation. The teachers' classroom skills--limited in many countries--are augmented by the media, and the teachers themselves feel supported, not replaced, by the radio lessons.

How is this meaningful to the problem of reducing educational costs and encouraging local participation in the support of education? Above all, it is clear that a well-designed radio instructional program can use the local teacher as a learning resource. In Africa, where communities may not have primary schools, local villagers could be recruited and trained to be monitors, if not instructors, to organize and work with radio-instructional programs. On a national scale, such local monitors would provide educational

support at costs far below those of "qualified" teachers. Many countries have expressed interest in the Nicaragua experiment. The Philippines, for example, will probably initiate its own version in the near future.

Economically, several complicated variables must be understood when eudcational technology is being considered. As Dr. François Orivel, an educational economist at the University of Dijon, has argued, there are distinct advant[illegible] to using educational media such as radio and television: they can provide quality instruction to more students, reduce the sense of isolation for teachers in rural areas, and encourage change elsewhere in the educational system. In addition, TV and radio programs can benefit teacher training and adult literacy programs, health campaigns, and agricultural extension and formal education programs. Especially for our purposes in this study, radio has the potential of supporting local peer and volunteer teachers and paraprofessionals, thus contributing to the possible reduction of teacher salary costs.

But, Orivel cautions, the media have drawbacks as well: sophisticated communications equipment can be expensive and difficult to maintain, drawing on scarce foreign exchange. Education becomes more centralized, more susceptible to political intervention and control. Effective uses of media require group interaction for maximum impact and learning. The organization of this "outreach" requires leadership, frequently central government support, and training of local leaders. Nevertheless, despite these drawbacks, radio is becoming an increasingly and widely used important educational support.

The success of Radio Mathematics and other radio-based educational efforts in Latin America and in various parts of Africa--Botswana, for example -- argue for increased attention to the potential of radio to deal with serious problems of educational costs. Orivel's cautions are well taken, however; the investment in quality software materials is an expensive development cost. If countries are willing to share the development and utilization, then the investment may be reasonable. If, however, each country demands its own special products, the cost may prove to be an insurmountable obstacle.

Nevertheless, despite his many cautions and the complexity of economic analysis to determine the cost-benefit ratio of media-based instruction, Orivel believes that educational technology is a necessity today. He argues that during the current five-year period, 1975-1980, even with reduced educational budgets compared to the expansion years of the late 1960s, resources for education are proceeding at a rate of three or four times higher than during the period of rapid expansion, at a rate analagous to that of the growth in school population. In this context, he argues, no progress is possible without the use of educational technologies. For that reason, the economist must become even more concerned with the study of media-based education.

What is needed now is a more in-depth study of the various ways radio and other communications technologies might reduce per capita costs for education. Although the availability of communications resources will vary among countries, Orivel suggests the following generalizations to guide educational planners in Africa about the role of radio:

- Systems which succumb to the temptation to acquire highly sophisticated technology see costs rise more rapidly than the improvement of skills.
- Systems using radio achieve their threshold of return faster than those using television.
- Systems in which needs have been clearly identified and in which the motivation of the organizers and the students is strong reinforce considerably radio's chances for success. Adult volunteers respond best to this approach.
- It is strongly recommended that existing resources be used in innovative ways: the use of school buildings outside of normal hours; the use of radio (and television) during off hours.
- The use of local resources (human resources as well as material) is always preferred to the use of imported resources.

III. Considerations and Recommendations

This brief overview of the State-of-the Art in community support of primary education has demonstrated that communities can indeed make important contributions to their own educational needs. Furthermore, if current rhetoric about educational reforms in Africa is any indication of the direction that primary education will take -- as in éducation de milieu and éducation pratique, for example -- the role of the community will be given increased importance.

According to the analyses of the economics of education in Africa by the Institut de Recherche sur l'Economie de l'Education, there is a new commitment to education in Africa after a period of retrenchment following a rapid expansion in the late 1960s. GNP in Africa allotted for educational expenses is substantially greater than that in the rest of the Third World,

although in the Black African countries the total amount available for education in national budgets is decreasing.

We hope the examples of community support for education, discussed in this study, suggest useful possibilities and raise important questions. It is our hope that these questions will be addressed by educators and planners from both developed and developing countries.

The cases reviewed in this study illustrate a range of alternatives that various countries and various communities have attempted in order to provide educational resources to meet the demands for national development. A more detailed economic study of the question has not been attempted. Dr Orivel's very recent study, not yet published, may contribute to a clearer understanding of the current crisis.

From the case studies we have reviewed, we can cautiously suggest some generalizations -- cautiously because "Africa" represents a wide range of social structures, cultural configurations, and levels of urbanization that must, of course, be considered. Nevertheless, the answers to how the communities studied mobilized resources necessary to develop community support for education suggest some predictable patterns that may be useful guidelines for educational policies.

First, in every case there was some tradition of communal self-help or mutual assistance in the community, especially among Moslem communities, such as those in Indonesia. But the form of these traditions (gotong royong, etc.) varies from country to country.

While such communal participation in community affairs is commonplace in Africa, its purposes vary. Education, for example, may not be a traditional focus of communal help. Traditionally, the members of a community have helped each other build homes, tend fields, build mosques. But modern education has been seen as the responsibility, for the most part, of the government. Communities have built schools with and without outside help (a favorite Peace Corps project); but a broader involvement in support for education seems to be more prevalent in East Africa, for example, than in West Africa, with missionary influences in the creation of the Harambee schools. In addition, as long as the community sees formal education as the key to social and economic mobility, it will be less interested in vocational and skills-training schools. Yet such schools have a better chance of self-support because they produce marketable goods and services and can maintain the physical plant of the school. That problem was very real for the Harambee school movement. At first, people did not want to build technical schools; they had to foster a new sense of importance for non-academic education.

One of the most important contributions that can be made to reducing educational costs is to involve more parents and community residents in the educational process. If such contributions can reduce even a portion of the high percentage of the total national budget allocated for education in many countries, then such community participation becomes significant. This concept is, of course, at the basis of the IMPACT project, with its "home tutors" and "instructional supervisors."

Despite the general sense that local participation in the financial support of primary schools could help solve the problem of budgetary ceilings for primary education that developing countries have reached, experts tend to be skeptical about the long-term ability of the community to support education.

Another tradition is the widespread rotating saving and credit associations whose popularity throughout the developing world has been attributed to "accessibility, flexibility, and adaptability to many purposes" (Bhatt, the World Bank). These associations, already in existence in many African countries, consist of members who meet periodically and make regular contributions which go to different members at specified intervals. If ten people are in a group and agree to contribute $10 a week for 10 weeks, each of the members will be able to have $100 in a given week. For the person who takes $100 the first week, the contributions amount to paying off credit to the group; for the last person to take the kitty, the weekly contributions amount to a savings account.

While these rotating credit and savings systems originally met expenses of traditional religious and social ceremonies, and for the collection of the dowry, members now use these funds for "modern" expenses - "education fees, brick-and zinc-roofed houses, sophisticated furniture, and yearly taxes," according to Bhatt. For example in Cameroon, 17 percent of the funds available through the djangji system go toward education fees. Bhatt calls for the marriage of such traditional credit systems with modern financial systems and institutions as an important way to enable rural communities to finance their development.

The ORDEV project in Egypt is a good example of this rural credit/saving system as support for community projects in general although not specifically for education. Designed and managed by existing village councils but financed for the most part by government funds, the project earmarks funds for financing whatever needs the communities have. However, only part of the money goes to school programs.

Of all the schemes we looked at to bring new funds to a community, perhaps the Banjanegara project in Indonesia is one of the more innovative, through admittedly complex, approaches. Although credit unions are not novel in Africa, the Banjanegara project demonstrates how a community can arrange for new ways of funding various needs. However, the project was inspired by outsiders -- professionals-- in a country that sees self-help and community development with governmental support as part of the major national political direction.

The need to convince communities to lend support for education brings us to the next apparent criterion for mobilization: leadership in an appropriate environment. In all of the programs we studied, mobilization of the community was stimulated and organized by an inspired leader within the community or, in some cases, by outside -- even foreign -- influences, such as the missionaries in Kenya; socially motivated technicians, such as the public health doctors in Indonesia; Dr. Orata, in the Philippines Barrio school movement; or the exceptional Mrs. Chung. Furthermore, the environment must allow for this leadership to take root and catalyze action in the community to sense and define needs, to change attitudes about the ability of the community to solve local problems, and to stimulate the development of resources within and without the community to meet these needs. Sometimes jealousies and political tensions result, as apparently occurred in the Comilla project, forcing its very effective leader, Dr. Kahn, to leave. Nevertheless, this kind of dynamic leadership in a receptive environment is the key to the creation of effective community support.

Intervention

Effective community support may indeed require outside intervention in the form of seeking capital for loans or establishing credit unions; for the construction of buildings or the purchase of equipment; for technical assistance to train villagers in the management of community projects; to supply information about organizing barrio schools; to provide teacher training as in Project IMPACT; or to obtain teachers and books from the national government. As long as developing countries centralize their resources, communites must rely on that central source for the technical assistance to make the local schools viable and productive.

In most developing countries, only the centralized government has the skill and ability to provide assistance for education. These supports are often not within the ability of rural communities. As Dr. Robert Johnson, USAID/Jamaica, cautions, efforts such as the Comilla projects and others that have successfully demonstrated that communities can be stimulated to actively support education may fail in the long run unless they have access to the technical information and professional talent necessary to support the implementation of the curriculum and pedagogy.

On a limited scale, local self-help efforts seem to work when members of the community contribute their services to build facilities or to raise some of the funds necessary to pay teachers' salaries; but for those efforts to be significant on a national scale, national leadership seems to be required, a situation which, in turn, tends to take over the "movement" and stultify the process.

A recent cost-benefit study by UNICEF on rural nonformal education (1974) reached the conclusion that program costs are always reduced when:

a. Existing schools are used;

b. The community helps provide the necessary facilities;

c. The participants make their own materials as an integral part of the educational activities;

d. Part-time staff are employed;

e. Unpaid volunteers are used, such as the mothers, who perceive their children's education to be a central part of their maternal duties;

f. Self-teaching materials are used, and the learners help one another with them;

g. Learning eventually becomes part of an activity or project with which the local community is concerned (such as child-rearing);

h. The community produces and sells articles to support the local schools.

The report of the SEAMEO regional conference on Use of Community Resources in Providing Low Cost Primary Education (November 1973) adds the following teacher-centered recommendations:

- One way to reduce costs is to divide the tasks of education into supervising, teaching, and mobilizing resources. Non-teachers can do part of these jobs.
- Teacher training is often ten years behind needs and practices. Teachers should be taught both how to use the resources of the community and how to improve their own skills.
- The use of students as teaching resources represents an alternative to either teacher-based or material-based systems.

Constraints to Transferability

We are not, of course, recommending any wholesale transferability of any of the cases we have studied to any other community. Instead, we are suggesting certain strategies for general consideration and the projection of a possible ideal model for local involvement and support. Several important constraints have been mentioned in the discussions of all case studies.

These constraints in the transferability of specific projects can be studied individually, but some additional general issues should be raised. If the contention is that successful community support for education must be assisted by some intervention from the outside, what kinds of interventions are possible in some of the poorer countries in Africa? The Barrio Project and Project IMPACT provide most of their own local resources for the educational programs. Which African communities can provide such services? For the countries of the Sahel, interventions such as capital funds for community loans, technical curriculum advisors, teacher trainers, books and materials are probably necessary. The Peace Corps and AID have been actively involved in school construction for many years; Peace Corps projects also have encouraged development of school gardens, although more for nutritional reasons than for school support. To what extent will these interventions interfere with any encouragement of self-help efforts for education? What community/national government partnership can be established that would create the most productive relationships to share the costs of primary education? And once established, what long-term effect will such a partnership have on the community?

In order to run the school, fees must be charged on a continuing basis, and those in the community who sold their chickens or pigs, or gave their life savings under community pressure to support the effort, now find that they are unable to send their children to the school because of high tuition fees. In this way, the poorest element in the community is discriminated against by the "democratically" formed school, while in urban areas, in which government-subsidized schools are free, there is a more democratic attendance -- education is available to both rich and poor. Conclusion: a school once built becomes a burden unless the government takes it over. At the same time, interest in the school by the community wanes as it is no longer "their" school.

Governments

The relationships of projects to the national government are a complex issue. The Harambee schools are an example of how this relationship can both encourage and frustrate progress toward the goals of the community. Although the Harambee school movement was built with the encouragement of the national government and does indeed relate to traditional local committees, the apparent success of the movement has created some difficulties. Financing was relatively easy, since funds came from both community resources and occasional outside donations. But the quality of education remains a problem: those schools in richer communities are able to afford better teachers. The national government incorporates these better schools more readily into the national system. The result is that, since parents want their children to attend the better schools, inequalities appear in the system. When there is a demand for an increase in financial contributions, parents are reluctant to pay, looking at the school program as less of a

communal effort and more of a government project. To maintain these schools and to direct them more and more to national development, the national government begins to exert increasing pressure and control. An extremely useful review of this complex issue can be found in Organizing and Financing Self-Help Education in Kenya, by J.E. Anderson (a UNESCO publication from the International Institute for Education Planning, Paris, 1973). A recent review of the Harambee schools in the Journal of African Studies (1977) also discusses the seriousness of this issue. It reports that "Harambee school fees are higher and the quality of education is less than that in government-subsidized schools...." The government takes over only those schools which meet their standards, thus discriminating against the poorer districts. Once a school is completed, the high fees drive away the poorer families that had contributed in some way to the construction. In the long run, political stability will require a more equitable support of communities with limited resources.

In encouraging self-help measures, local community structures and the presence of skilled organizers must be taken into account. In Liberia, a program to build schools in rural villages with AID assistance to complement the efforts of the national governments and local villagers succeeded as long as its scope remained limited. Once the project expanded nationwide, replacing villagers with contractors, the quality and momentum dissolved.

The kind of local support which is most feasible for local rural (poor) communities is in the construction and maintenance of a school building. To be able to sustain the kind of recurrent costs which a school incurs -- teacher salaries, teaching materials, etc. -- is to expect a steady inflow of currency.

Most income-generating activities -- such as an agricultural project-- are at the mercy of both natural and marketing phenomena, as a result of which income fluctuates. A production activity is likewise at the mercy of the state of the market and is, therefore, not necessarily reliable.

The Land Tenure Center at the University of Wisconsin has brought to our attention the fact that increased income in the rural sector, even though used for the purposes of supporting community education and other social services, often results in increased taxation, with the revenues going primarily to the urban centers. The Barrio schools did manage to get government support of 50 percent of the share of the real estate tax paid by the Barrio people -- less than five percent of the total Barrio school budget.

What, then, is the role of outside funding if we argue that self-help is usually limited, although more and more critical to education where demand exceeds resources? In many of the projects we see the familiar third party catalyst: the missionary for the Harambee schools, enlightened doctors in Indonesia, government intervention in the guise of community development agents in other places. The reality is that most people believe it is the responsibility of the national government to provide education.

Outside sources can contribute to local capital loan funds -- e.g., the ORDEV projects -- thus providing more credit and loan programs in education similar to those frequently provided for in the Rural Development program for Niger. Outside resources can provide technical assistance as well, such as the role that IDRC played in the development of Project IMPACT.

Again the necessity of outside financing (some 75 percent from national sources for ORDEV) might obviate the transferability of the loan projects

unless some foreign donor were willing to invest, as AID apparently intends to do in Egypt.

Inter-System Problems: Jealousies

The Barrio schools have had different problems: apparently well-organized, the schools have been challenged by the private secondary schools in the Philippines. Jealous of their success and lower fees, the private schools have attempted to legally challenge the continuation of the schools. The Barrio schools are also facing the difficulty of getting enough teachers to support the growth of the movement, and teachers themselves have not always encouraged and supported community efforts. In its review of community education in Africa, the Institute of Education of the University of London notes that teacher organizations do not like local control of schools, and they are in the vanguard of moves to get local or religious primary schools taken over by central government.

A Comprehensive Model

Considering the impressive accomplishments of the projects we have discussed in this study, we believe it is possible to design a comprehensive model which would incorporate several of the most successful components of these projects. An ideal model, however, would be possible only if the appropriate social criteria were present. Our study was too brief to determine the subtleties of the social and cultural realities of the countries from which the case studies were drawn, but the most useful criteria for our purposes and for the purpose of projecting a model of community support for education would seem to be the following:

- a traditional structure of communal self-help;
- the presence of a convincing, if not charismatic, leader for community development;
- outside intervention in the form of capital loan funds, technical assistance, training, etc.

In the larger, more innovative, and probably, in the long run, more successful programs -- the Indonesia Project, Project IMPACT, the Barrio High School Program, and the Comilla Project -- all these criteria were met.

Given this context, a comprehensive model might include, in addition to communal construction of the facilities, external loan funds (ORDEV Program); home tutors and instructional supervisors (IMPACT); support by radio-based instructional materials (Radio Mathematics, Nicaragua); commitments to specific income-generating tasks by students and parents for school support (Barrio Schools); and community project management and training and technical assistance from national sources.

Much of the above discussion has centered around secondary schools and vocational education. We would like to offer useful suggestions for primary education, but we are aware of the reality that primary school students are not as capable of producing income-generating activities as are secondary school students. The Barrio high school system is one of commitment by both children and parents to activities that produce the revenue to maintain the program. Obviously, the transferance of this model to a primary school environment would be limited. Nevertheless, the idea of public commitment to a task which would produce income to support a school might not be difficult to establish in a primary school context. Even some of the older primary school children, and certainly those older ones who are repeating,

could take on such tasks.

In addition to encouraging further economic and social analysis and research into particular aspects of community support for education, further discussions and involvement of African educators and planners seem in order. The questions of pre-school and nurseries, the incorporation of traditional educational resources into modern educational experiences, alternative educational systems, and the broad question of government support, suggest the usefulness of gathering concerned Africans in one or several meetings to share experiences, interests, and expertise in developing African educational policies.

APPENDIX A

Project Case Studies

DO NOT WRITE
BELOW THIS

BANGLADESH

THE COMILLA PROJECT

COMMUNITY PROFILE

- The typical farmer in Bangladesh holds about three fragmented acres of land.
- 20 percent of the adults are literate. Among them the traders and money lenders form a rural elite.

MOBILIZATION

- Akthar Hameed Khan mobilized the Comilla project around cooperatives, both agricultural and otherwise.
- He set up training center (TTDC) with experts from many areas who met regularly with delegates from various groups.
- Village groups were formed which received feedback from their delegates who attended TTDC meetings.
- Co-ops were organized in the hope that they would replace the money lenders and serve as "trade unions" for small farmers.
- Successive attempts were made to mobilize national youth, in youth clubs, first after the 1971 independence war, then after the flood and famine of 1971.
- In the Kotwali thana ("social laboratory/region") of Comilla Academy, there are 52 youth clubs in the 52 villages. Youth clubs have started both primary and adult education programs.
- Earlier youth clubs (early '60s) were organized around schools.
- Comilla experimented for two years with school works program which combined school construction with higher teacher salaries and

creation of school boards as part of local government councils. This program was unacceptable to the Education Department of Government of Pakistan.

COMMUNITY RESOURCES

- By 1968, the project had 15,000 members in 339 co-ops; accumulated savings and shares amounted to $250,000.
- Co-ops in Comilla raised real per capita gross income 22 percent.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- Comilla started a feeder school program in the 1960s, using religious leaders and qualified women to teach children in primary training.
- Feeder schools became imam-led programs.
- Both women and men were given literacy training.

GOVERNMENTAL IMPACT (INPUT)

- Military government provided environment for political stability and economic growth.
- Government of Pakistan gave early and continued financial and administrative aid to project, approximately $300,000 annually; the Ford Foundation gave $1.9 million.
- Expenditures for Comilla were based on its role as a national training and research organization.
- Through IRDP (Integrated Rural Development Program), government tried to expand what had been a good model program.

INCENTIVE STRUCTURE

- Improved irrigation of lands;
- Increased crop production;
- Improved transportation and marketing facilities;
- Improved group access to education, health and family planning services.

CONSTRAINTS

Project worked well in immediate area of Academy's work (Kotwali thana); expansion to other areas of the country did not work well. As national program grew, problems multiplied; three main ministries--Agriculture, Education, Rural Development--conflicted over funds and jurisdiction.

IRDP--bureaucratic centralization at national level and poor implementation at local level. (Problems had been inherent in early program, but were managed because of small scale of project and dynamic leadership of iman.)

Under IRDP, village organizations include only about one-third of rural families; village organizations mostly under control of rural elite, and, therefore, class polarization has increased.

Introduction of IRDP seems to have coincided with the departure of Dr. Khan.

TRANSFERABILITY

- Some methods seem transferable, especially local co-ops and methods of community organization that can spin off other projects (self-help) or raise local incomes and thereby create capital.
- In general, Comilla can suggest organizational methods for extension, but also shows the problems that arise when attempts are made to expand.

Source:

Choldin, Harvey M. "An Organizational Analysis of Rural Development Projects at Comilla, East Pakistan." Economic Development and Cultural Change, Vol. 20, No. 4, July 1972.

Luykx, Nicolaas. The Comilla Project, East Pakistan. Dept. of Agricultural Economics, Michigan State University, October 1969.

Schramm, Wilbur, and Daniel Lerner, eds. Communication and Change: The Last Ten Years - and the Next. University of Hawaii Press. Honolulu, 1976.

Stevens, Robert D. Rural Development Programs for Adaptation from Comilla, Bangladesh. Dept. of Agricultural Economics, Michigan State University, April 1975.

BOTSWANA

BOTSWANA BRIGADES

COMMUNITY PROFILE

- Southern African communities with typical lack of adequate secondary education facilities
- Low per capita income
- High rate of early-school dropouts
- High rural unemployment

MOBILIZATION

- Brigades begun in 1965 through initiative of Patrick Van Rensburg, South African expatriate,who came to Botswana three years earlier to teach in an elementary school in Serowe.
- One year after arrival, he established town's first secondary school, Swaneng Hill, built through cooperative efforts of students, staff, and villagers.
- School maintained by students contributing their labor in lieu of fees.
- "Development studies" were one part of revised curriculum that also emphasized the technical training necessary to maintain the school.
- Offshoot of Swaneng was creation of the Brigades, with the purpose of training school leavers and, at the same time, earning money through production to cover costs of training.
- "The brigade trainee is also a worker whose production pays for his training," wrote Van Rensburg. "It is in learning to produce, to be productive, that he also acquires his skill."

- The original Builders' Brigade in Serowe led to the creation of other Brigades in farming, textiles, and handicrafts. All training was done with the intent that skills learned would be used in the community in which they were taught.
- Six years after it had begun, the Serowe Builders Brigade was able to break even in terms of recurrent costs. But not all the Brigades were as fortunate; there was particular difficulty in the Farmers' Brigade, where the initial capital costs were much higher. Although some Brigades have received outside financial support, their continued aim is to be self-supportive through the sale of their own products.

COMMUNITY RESOURCES

- Dependent on availability of volunteer, expatriate teachers.
- Financing comes from: (1) Brigade work--Brigades recouping a major proportion of available work: (2) international donors who have provided grants and loans to the government; (3) private donors who fund Brigade centers.
- Boiteko--a communal outlet for Brigade products--voucher system.
- Wool factory profits go towards community development projects such as the consumers' co-op and loan fund.

- The community trust in Serowe has been able to "midwife" several co-ops, which then finance community social services.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- There were no secondary schools at all in the country prior to 1966, a situation which left the people open to alternative educational possibilities.
- Reliance on a community trust fund for administrative needs ensures the Brigades a large measure of local participation.
- Cooperative movements and associations are formed with comparative ease.
- There are possibilities of linking work training to post-employment. Brigades hope to keep workers together after "graduation" so each brigade can benefit from work of others.
- Production units have been successful because they are small, flexible, avoid "over-bureaucratization," are relevant to local employment needs, and are cheaper for community.
- Provide employment through co-op production workshops.
- Self-help a catalyst for recruiting outside aid.

CONSTRAINTS

- An inherent problem for the Brigades is how to combine both academic and practical training without sacrificing the quality of either.

- Currently, one day per week is set aside for academic training, which includes courses in science, mathematics, English, and cultural studies; the remaining four days are given to practical training and actual work, limiting the cost-covering capabilities of the work efforts.
- A further impediment has been some opposition from parents who see manual labor as inferior to academic education.
- There is a shortage of both qualified and willing teachers for the program. Presently, the shortage is made up by a number of expatriate, volunteer teachers.
- Brigades have, in the past, been in short supply of management and marketing skills necessary to ensure continued and efficient outlets for their production.
- In addition, there has been a shortage of markets in the country itself for the goods and services produced by the Brigades. There has been an attempt to start a trade exchange where Brigade members can trade such materials among themselves.

TRANSFERABILITY

- Possibilities of transfer depend on the acceptance by the national governments of alternatives to traditional forms of education. In Botswana, the Brigades seem to work best with minimal governmental control.
- Brigades might be more feasible in the richer African countries that would provide greater demand for the skills and products of Brigade labor. Ironically, according to Dr. James Sheffield (Columbia Teachers' College), the Brigades might "remain concentrated

only in centers with sufficient resources to support them."

Source:

Van Rensburg, Patrick. Report from Swaneng Hill, Education and Employment in an African Country. The Dag Hammarskjold Foundation, Uppala, 1974.

Sheffield, James R., and Victor P. Diejomaoh. "Brigade Training in Botswana." Development Digest, Vol, XI, No. 1, Jan. 1973.

_____. Non-Formal Education in African Development. African American Institute. New York, 1972.

EGYPT

ORDEV (Organization for Rural Development)

COMMUNITY PROFILE

- National program to improve rural village life in face of increasing population and a deteriorating agriculture.
- Majority of small farmers and growing number of landless laborers have annual per capita income of about $360.
- ORDEV project works closely with Village Councils to encourage social and physical infrastructure projects.

MOBILIZATION

- Projects generally organized and run by the Village Council.

COMMUNITY RESOURCES

- ORDEV finances Village Councils to develop income-generating projects and provide services to those projects.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- The Village Councils are recent developments, part of the national government's decentralization efforts.
- The Councils are composed of trained villagers who are experienced and educated but who do not constitute an economically advantaged group; they tend to be entrepreneurial.
- The government can thus exploit the skills and motivations of these cadres for the village development programs.

GOVERNMENTAL IMPACT (INPUT)

- ORDEV is a national project which finances 75 percent of Village Council projects.
- Funding also comes from foreign donors, including AID.
- In addition to funds for capital loans, ORDEV will provide the technical assistance and training for Council activities in management, project development, etc.

INCENTIVE STRUCTURE

- Basic incentive is the need to improve the welfare of village life.
- The large number of educated villagers provide energies that can be tapped to promote village development, if resources to do so are available.

CONSTRAINTS

- Almost totally dependent on government funds and political support.

TRANSFERABILITY

- The Village Council project system is not unknown in other African countries, although Egypt has probably evolved a more elaborate model than most of Black Africa because of the availability of skilled human resources, a seasoned entreprenurial motivation, and political commitment to decentralization.

Source:

Harik, Iliya F. Decentralization and Development in Rural Egypt: A Description and Assessment. Prepared for USAID, Egypt, Oct. 1977.

Mayfield, James B. "The Budgetary System in the Arab Republic of Egypt: Its Role in Local Govt." Development, Univ. of Utah, Aug. 1977, prepared for AID.

"Rural Development Project-ORDEV, Full Report of the Identification Mission," Rural Development Div., Agr. and Rural Development, Ministry of Local Development, Govt. of Egypt, April 1978.

INDONESIA (BANGANEGARA REGION)

THE BANGANEGARA COMMUNITY DEVELOPMENT PROJECT

COMMUNITY PROFILE

- Population of 630,000 people, with $30 per capita income.
- Population density is as much as 1500 per square kilometer.
- Mountainous access to the area is difficult.
- Rice lands along the river are fertile; most farmers are subsistence farmers.
- Very limited infrastructure to support this region.
- Serious health problems and lack of facilities led to the development of the Banganegara Project.

MOBILIZATION

- The Banganegara Project, a health care program, was started by Dr. Lukas Hendrata within the context of a national self-help philosophy encouraged by the national government.
- Important mobilization factor is that scattered field clinics are available.
- A doctor, the most educated person in the region, was the initial catalyst.
- Stress is on community participation. Initially, a local survey is made of felt needs, then a project meant to produce results and build confidence is attempted.
- Reliance on gotong royong, traditional contribution of service to the community.

- Mobilization of teachers and students as extension agents; cadres, locally recruited, are volunteers and apparently given encouragement and direction by doctor (in health care) or trainer from some other ministry (agriculture, information, etc.)

COMMUNITY RESOURCES

- The project is based on a tradition of communal assistance. The catalytic presence of concerned outsiders has activated existing motivation toward self-help and the re-cycling of internal community resources and leadership.
- Strong points include: use of existing community leadership structures; use of existing women's groups; recognition of position and influence of community teachers and schools.
- Women's organizations used to supply labor and organizational strength.
- Communal work system-gotong royong ("working together"): villagers give one day of labor per month per village for local improvement.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- Local tradition of gotong royong, or individual labor for community goals.
- No great ethnic divisions or major group rivalries in the local society.
- Teachers are respected community members; many activities centered around school.

GOVERNMENTAL IMPACT (INPUT)

- The "bupah" (head of Banganegara region) seems particarly supportive of the program, both politically and financially. He initiated a development board to provide some coordination to the mobilization of resources. Bupah supplemented low salaries of some doctors.
- Extension agents are not paid; material rewards not to individuals, but to groups. Cadres are rewarded by "knowledge, participation, discussion--and by receiving visitors."

INCENTIVE STRUCTURE

- Fund used as a credit union mechanism to provide low-cost loans to villages for a wide range of community education and development projects, built around a tradition of community involvement in planning and implementing community improvement projects.
- Project uses "pilot villages" in each sub-district to stimulate surrounding villages, helping others to identify their needs and train village workers.

CONSTRAINTS

- No integrated national organizational structure.
- Lack of educated "sub-district officials" and village leaders make acceptance of some changes difficult.
- Program dependent on high degree of dedication and altruism.
- Opposition from some in medical community.

TRANSFERABILITY

- Most applicable to those African villages with a strong organizational structure in village life and a tradition of working together for village improvement.
- Cadres given training in various areas by different government departments: agriculture, information, fisheries; therefore, considerable potential for transferability, building on extension program and traditional "credit trainers."

Source:

Haliman, Arif. Community Development Through Primary Health Care: The Banjarnegara, Regional Health Service, Banjarnegara, Indonesia (mimeo.).

KENYA

HARAMBEE SCHOOLS, VILLAGE POLYTECHNICS (VPs)

COMMUNITY PROFILES

- Harambee activities have taken place in many rural Kenyan villages, although often in the villages with the most resources available to them; thus, there has been an unequal distribution of the schools. VP program also takes place at rural level but depends on outside assistance.

MOBILIZATION METHODS

HARAMBEE SCHOOLS

- The tradition of community mobilization is long established in all but pastoral Kenya groups. From birth a clan member has rights, duties, and obligations.
- The independent schools in Kenya first developed in the early 1900s.
- The Kikuyu had a very sophisticated network of 200-400 schools until October 1952, when they came into conflict with missionaries over a tribal rite (Mau mau wars).
- Community groups were responsible for upkeep and expansion of schools.
- Harambee schools are an out-growth of these. Committees were formed to undertake the project.
- Publicly the government supports these expressions of self-help but privately would like them curbed, because the community decides unilaterally on building the school without consultation about the need, location, or government plan of school development.
- Support of the school is a constant problem for a community.

Dances, raffles, proceeds from games, donations from charitable organizations, as well as school fees (which can be as much as 20 percent of parental wages) help support the school.

- KIAMBU--Harambee Technical School--local individuals and groups donate to project "selflessly in the Harambee spirit."
- 1968, only 7 percent of capital costs for elementary schools came from sources outside the community (Oxfam, AID, etc.) Urban schools generally have more access to outside funds, including corporate gifts and public funds.
- For unaided schools, local community is responsible for both capital and recurrent fees.

VILLAGE POLYTECHNICS

- Basic support and coordination of Village Polytechnics comes from NCCK (annual $1400 grants) which helps out with over 50 percent of schools' budgets. VP cost is $70/trainee vs. $130-150 for regular secondary schools; they have been able to get some local contracts, which in one school made up 28 percent of budgetary support. Located on church or country council land; students often build school buildings.
- Not as much use of local sources as Harambee.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- Kenya (Harambee) tradition has roots to colonial times when British tried to control expansion of schools out of concern for increased recurrent costs.
- Again, in 1950s villagers rejected central coordination since they felt it would limit their opportunity for education.

- VPs idea originated with NCCK as an alternative to school dropout (90 percent) problem. They are meant to be oriented toward local needs. NCCK acts as coordinator of VP movement.

GOVERNMENTAL IMPACT (INPUT)

- VPs get very little governmental support because of lack of money and because the government cannot decide on appropriate assistance.
- At Kiambu, the first Harambee technical school (1973), a government grants supports recurrent expenditures.
- Government picks up only about one-third of recurrent costs in first-level schools. (The rest is covered by the community in the form of taxes or fees.)
- Only about one-third of the second-level schools are aided by the government.

INCENTIVE STRUCTURE

- Village gets new school, prestige--especially with second-level schools; youngsters who would otherwise have been school dropouts given a chance to start secondary education.

CONSTRAINTS

- Harambee can be socially and ethnically devisive. Since some communities are more progressive than others, there is more educational advancement for richer areas than poorer; thus, short-term benefits in the form of more schools could present more long-term national problems.

- Outright integration of Harambee schools could make people rely more on public financing.
- Uncontroled Harambee development without government coordination is not beneficial to national plans.
- Government lost a chance to influence Harambee by insisting that school facilities conform to rigid "government standards."
- Dilemma: In the Harambee situation, how can the government exercise control without damaging local initiative?
- VPs largely rely on support of outside organization--NCCK;
- Local groups are unwilling to provide help to "non-prestige" skills training.

TRANSFERABILITY

- Harambee, a grassroots movement originally begun to counter colonial government policy, is still quite independent of government, relying on local initiative. It may be difficult to transfer the tradition.
- The idea of localities covering capital and some recurrent costs would save central government expenses.
- Self-help efforts and groups can be polarized by personalities or parochial rivalries. Thus, transferability is difficult, causing duplication of effort and leading to local rivalries.
- The idea of transferring the VPs to the Harambee framework should be considered. If successful, other communities could pick it up, as Kiambu largely did in 1973.
- Vocational education centers need some (at least initial) outside

support; if not, they could be established as part of an integrated development program.

Source:

Anderson, J.E. Organization and Financing of Self-Help Education in Kenya. Specific case studies. UNESCO/IIEP: Paris, 1973.

Ahmed, Manzoor, and Philip H. Coombs, eds. Education for Rural Development: Case Studies for Planners. Praeger Special Studies. New York, 1975.

Sheffield, James R., and Victor P. Diejomaoh. Non-Formal Education in African Development. African American Institute. New York, 1972.

NFE Exchange, Nos. 9 and 10. (See reference to Cort and Ghai; also to writings by Godfrey and Mutiso).

KOREA

MOTHERS' CLUB (ORYU LI)

COMMUNITY PROFILE

- Oryu Li considered the "poorest village in the poorest township in the county."

MOBILIZATION METHODS

- Mothers' Club, formed by PPFK*, flourished under inspired leadership of Mrs. Chung, who established mutual funds and credit unions.
- Community development started with home improvements, rebuilding of stores and food storage areas.
- Young Men's Club started to help with chestnut tree nursery.
- Weaving factory and, finally, land acquired for program.
- Good system of communication and information processing in village.

COMMUNITY RESOURCES

- Mrs. Chung introduced idea of Mothers' Club bank and general fund that could be used for mutual development projects and ultimately children's education.
- Village residents used pooled savings to buy cloth with which they made school uniforms. With part of profit from this ($7), they started mutual funds.
- At harvest, Mothers' Club grew and Agricultural Cooperative Bank was formed.
- Members also make monthly rice contributions.

*Planned Parenthood

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- Purchase of land finally integrated Mothers' Club with traditional clan system.
- Mothers' Club broke new ground for women in Korean society; their role had gradually been changing, largely because of American contacts.
- Korean society seems more tightly homogeneous than African.
- Mothers' Clubs were based on traditional, informal women's associations.

GOVERNMENTAL IMPACT (INPUT)

- Planned Parenthood (PPFK) organized 1,200 Mothers' Clubs in 1968, which coincided with the government's New Village Movements.
- Regional governor donated cement to Mothers' Club and promised other improvements for village.

INCENTIVE STRUCTURE

- Tangible results directly related to support from communal fund.
- Mrs. Chung's own enthusiasm and personal contributions encouraged others.
- Men were envious of results women were achieving: Parenthood Federation Prizes, e.g., piglets offered by Planned Parenthood Federation.
- Women involved had never seen themselves as aggressive.

CONSTRAINTS

- Highly dependent on strong leadership.
- Very strong traditional attitudes about women; also held by women.

TRANSFERABILITY

- Could be transferable because of the market/business orientation of African women, although Korean society is more integrated than African.
- Strong point for education is that mutual fund could be used for school fees.

Source:

Kincaid, D. Lawrence, and June Ock Yem, "The Needle and the Ax--Communication and Development in a Korean Village," in Communication and Change: The Last Ten Years - and the Next, edited by Wilbur Schramm and Daniel Lerner. University of Hawaii Press. Honolulu, 1976.

PHILIPPINES

BARRIO HIGH SCHOOLS

COMMUNITY PROFILE

- Secondary education largely restricted to cities, towns, and larger villages; not available to children in small, rural villages who cannot afford private school tuition or the costs of clothing, school supplies, and transportation to the nearest public high school.

MOBILIZATION

- Barrio high schools developed in 1964 in three countries by Dr. Pedro Orata after his retirement as teacher, UNESCO official, and senior educator in the Philippines.
- In 1972, there were over 1,500 schools.

COMMUNITY RESOURCES

- Project is supported entirely by community resources.
- Students and parents must make written agreements to work at tasks and produce income to support school and teachers.
- Community also hires students for civic improvement projects.
- Some international businesses and organizations have made small contributions.
- Tuition fees of approximately $80 per student make schools largely self-supporting; one school used such fees to pay over 80 percent of its operating budget.
- Schools also raise money with fiestas, raffles, an agricultural tax on local production, movies, shows, donations from civic-minded

individuals or group, and from vegetable gardens.

- High schools use existing primary school buildings.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- There is strong broad-based community support and involvement.
- Opportunities for education which exist only in urban areas result in enormous frustration in rural areas.

GOVERNMENTAL IMPACT (INPUT)

- Government cooperative, but no substantial governmental financial support for the project, although occasionally various local governments set aside funds to hire Barrio school students.
- Government allows 50 percent of the 10 percent barrio share of the real estate tax paid by the barrio people, which constitutes five percent or less of the total budget.

CONSTRAINTS

- Private schools have instituted legal challenges to close down the Barrio project.
- Teachers' salaries are often low; collection of tuition fees is irregular, making payment of salaries irregular, too.
- Over-dependence on tuition fees results in a inadequate operational budget.
- Vocational education programs are often viewed as second best to more formal systems.

TRANSFERABILITY

- Barrio model could be transferred to primary-school level in some parts of Africa, but younger students would not be as productive, and, therefore, could not raise as much support money for the schools.
- Barrio project is one the best examples of a community support model.
- Critical issues are resources for generating income and availability of teachers.

Source:

Orata, Pedro. Self-Help Barrio High Schools. SEAMEO, Regional Center for Educational Innovation and Technology, Singapore, 1972.

PHILIPPINES/INDONESIA

PROJECT IMPACT: PROYEK PAMONG
(IMPACT: Instructional Management by Parents, Community, and Teachers)

COMMUNITY PROFILES

- Rural communities in southeast Asia, in clusters of four-to-five villages.
- Half the children in the 7-12 age group actually in primary school.
- Need to reduce educational costs per student.
- Children grow up speaking a language different from the language of instruction that is normally introduced in Grade 4.
- Areas selected are in central Java and in central Philippines.

MOBILIZATION

- Project was developed by the Regional Center for Educational Innovation and Technology of the South East Asian Ministers of Education Organization.
- Project sites were selected on the basis of specific research criteria; new sites for 1977-79 were added.
- Local committees were established at each site to launch and support the project.

COMMUNITY RESOURCES

- In the Philippines, parents traditionally active in school activities.
- Community residents provide construction and maintenance as well as tutoring.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- Strong sense of community identification, especially in Indonesia.
- Positive leadership role of the Indonesia community leaders.
- Use of community learning centers that could be built by and belong to the community.

GOVERNMENTAL IMPACT (INPUT)

- Outside suppport from foreign donors: principally IDRC (Canada).
- Cooperation with government education offices and field officers.

INCENTIVE STRUCTURE

- At present, 80-90 percent of the recurring costs of education budgets in southeast Asia are teacher salaries.
- Doubling enrollment means doubling the greatest part of the budget; therefore, involving parents and the community in the educational process and using teachers as instructional supervisors might provide a relief from this burden.
- Students in the IMPACT Program seem to achieve higher levels of performance in a range of academic subjects.

CONSTRAINTS

- High initial research and development costs which, in the long run, would reduce the number of teacher employees if program were fully implemented.

TRANSFERABILITY

- Engaging members of the community as home tutors under the supervision of a trained teacher seems to be a transferable idea.
- Involvement of parents in the construction of educational facilities is also an acceptable concept in many parts of Africa.
- Self-teaching modules can be developed for any curriculum.
- Peer tutoring is transferable.

Source:

Sanger, Clyde. Project Impact. International Development Research Centre, Ottawa, Canada, 1977.

Innotech reports on Project Impact.

TANZANIA

KWAMSISI PROJECT

COMMUNITY PROFILE

- As part of the Ujamaa concept of self-help, the village requires the involvement of all inhabitants in community development.
- Community generally is poor and rural, but there is 100 percent enrollment of school-age children.

MOBILIZATION

- Government-encouraged; political philosophy encourages local self-help. The political party (TANU) and government structures promote the Kwamsisi program.

COMMUNITY RESOURCES

- Community initiates self-help projects with support from local government field workers and the Korogwe College of National Education.
- "Learning and doing" support both the academic and village development processes.
- Community maintains school buildings through vocational training program.

SOCIAL STRUCTURE/CULTURAL CONSIDERATIONS

- Both traditional communal help concepts and modern political philosophy and structure support the educational program.

GOVERNMENTAL IMPACT (INPUT)

- Technical assistance is provided by the government and nearby college.
- Government pays salaries, provides books, equipment, etc.
- Some international funding.

INCENTIVE STRUCTURE

- Participation in the Ujamaa movement seems to be a strong incentive.
- Joint community projects result in better school conditions and improved quality of life, e.g., clothing, nutrition.
- Villagers identify own needs, though assisted by college. For example, new skill-training opportunities are readily available through the Kwamsisi project.

CONSTRAINTS

- Heavily dependent on government for support and encouragement as well as for technical assistance.

TRANSFERABILITY

- The Kwamsisi project, in various forms, has been initiated in other parts of Africa willing to accept the general governmental and political involvement--more so in Anglophone than in Francophone countries.

Source:

Cliffe, Lionel, and John Saul. Socialism in Tanzania - Ujamaa Villages. Dar es Salaam, 1972.

APPENDIX B

Project Summaries

The following summaries refer to community-level projects, cited within the report, that help defray educational costs.

BANGLADESH Support: Local

The Comilla Project started as a rural development laboratory to modernize agriculture and other aspects of rural life in East Pakistan. In 1961 four educational experiments were launched which included school plant improvement, training of village women to teach small children, and a feeder school system. This last has become an imam teacher program. Imams were given training in literacy methods and taught both children and adults. The success of these programs has not induced the Department of Education to adopt them, however.

BOLIVIA Support: AID

AID supported this self-help project which has as its goal the construction of or improvements to about 172 primary schools in the Department of Cochabamba. Community residents provide labor while learning carpentry, simple mechanics, and the elements of building water systems and bathrooms.

BOTSWANA Support: International organizations

The Lentswe La Oodi Weavers is a small-scale rural industry begun in Botswana in 1973. Factory profits are used to assist general village development.

BOTSWANA Support: International organizations

The Serowe Brigades - the first of the Botswana Brigades - was a secondary-school project to provide on-the-job training in 20 different skills, along with a more formal education. Production is geared both to skill-training and to generating income to pay for education and training. The term "brigade" evolved as working teams were set up to do paid work for outside agencies, which generated the necessary income to pay the school's recurrent costs.

GHANA Support: German Government

The Biriwa Project was initiated in 1966 to help unemployed fishermen. The men have developed several small service industries. Profits from the project are channeled into community development projects through a Village Development Council established for this purpose. There are also work days given for community development tasks.

INDIA Support: Local

The Mitraniketan project has integrated work experience programs into its primary and secondary school structures since its inception in the early 1960s. Work experiences in the program are diverse and vary according to the learner's age. Younger children may perform such tasks as maintaining the grounds, cleaning utensils, and watering plants.

INDIA Support: CLUSA, Ford Foundation

The Kaira (Amul) Cooperative is a cooperative milk-producing project composed of 830 villages and a membership of 250,000. Some of the profits earned by the village milk cooperatives are invested in village libraries, primary and secondary schools, health centers, water works, and roads.

IRAN Support: National Government

Iran's Education Corps is alternative military service for second-level certificate holders. After six months of training - if they have chosen to be primary teachers - they will be assigned to rural communities that have requested teachers and provided for housing. Local authorities are expected to "make a massive contribution to the building of schools...the outstanding original feature of the experiment." Statistics show that the cost per pupil in an ordinary system's school is 72 percent higher than that for a pupil in an Education Corps school.

INDONESIA Support: National government, local

The Banharnegara region of Java instituted a pre-paid health care program which was later supported by the community. Monthly payments by each member family, a lottery, and occasional government loans or donations provide the financial support for the health care system. The fund is used as a credit union in some villages to provide low cost loans to villagers for projects such as fisheries.

KENYA — Support: Local, National Government (small percentage)

The Harambee self-help movement is one of the most successful of its kind. It is an outgrowth of a reaction to British colonial control of the schools and continues to expand and develop. In this program the community supports its schools through proceeds from dances, raffles, games, and donations from charitable organizations.

KENYA — Support: National Christian Council of Kenya

The Village Polytechnics (VPs) program provides essential skills-training at the local village level for 175 communities. Proceeds from the participants' work are frequently reinvested in the project.

NEW YORK/NEW JERSEY — Support: State

These states initiated a state lottery whose purpose was to support the state education system.

PHILIPPINES — Support: Department of Education

The Self-Help Barrio High Schools are a cooperative undertaking of parents, students, and rural community leaders. Tuition comes from the sale of home projects and from the parents, who agree to work with vocational and agricultural teachers in raising the productivity of farms and home lots.

PHILIPPINES/INDONESIA/JAMAICA/MALAYSIA/LIBERIA

Support: National Government, Innotech, IDRC

Project IMPACT is an experiment to cut the cost of mass primary education. The core of the program is a rewriting of the school syllabus into self-instructional modules with which students can proceed at their own pace. This plan enables students to move in and out of the system without becoming either repeaters or dropouts because of missing "regular" classes. The other innovation is the use of upper-primary students as peer tutors for the younger students in groups of three to five.

RWANDA Support: Local

In this program primary school students in rural areas work in experimental gardens to help raise money for their schools. The gardens are divided into three plots: in the first, traditional gardening methods are used; in the second, improved methods with organic manures; and in the third, modern methods with fertilizers. In one school, eight- and nine-year-olds harvested and sold $120 worth of potatoes. Their profits were six times those of traditional schools.

SENEGAL Support Local and national

This project was an experiment in rural community development. Its aim was to decentralize administration and increase local participation in development. Councils were elected locally and given responsibility for deciding community priorities and drawing budgets. Funds came out of the taxes

paid to the central government, 75 percent of which are now allocated for local use. The funds are to be invested in new development activities, and not on operational costs. During the first two years, 30 rural communities were created. Among achievements are new cooperatives, new training centers, wells, and vegetable gardens.

TANZANIA Support: National government

Paraprofessionals are at the core of the Tanzanian health care system. Village-level workers receive training to work in their own communities, where they are paid by a share of village crops.

The following summaries refer to other community-level projects of interest, not cited within the report.

CHILE — Support: The co-op itself

A fairly large agricultural cooperative, Cooperativo de Curico, with very tough financial management has been able to successfully operate in the black, and funds a health clinic with some of its profits. This is entirely a local project with no outside support and, therefore, no documentation such as would have been provided by donor agencies.

CHILE — Support: Local and institutional, Inter-American Foundation

In Alto Chelle, Chile, the first rural family school of what is hoped to be a network has begun. The idea, spawned by Jean Charpentier from French models, is for a community to form a corporation, provide the school building (including dormitories), and cultivate land. It will own the school's assets. The Institute de Educacion Rural, a private organization which receives government subsidy, provides an agricultural and primary curriculum, and the teachers. Students spend two weeks in school, then two on the farm, applying what they have learned and working on a project. These schools exist in Argentina, Brazil, and Nicaragua as well.

COMORES - MAURITANIA — Support: Local

In Comores, the Koranic schools are being integrated as pre-primary schools in the national system of education. Innovative activities using Koranic teachers in regular school programs are being experimented with in both Comores and Mauritania.

ETHIOPIA Support: Local and others

This basic education experiment, started in a refugee camp of the drought-stricken area, is now being extended to many rural communities where the peasant association is responsible for the administration of schools, appointment, salary, and housing of teachers.

INDIA Support: Local

This education project in Madras was supported by the people themselves, who contributed land, buildings, equipment, meals, sanitation, water supply, and labor. In particular, participants were expected to maintain and repair the school building, resurface blackboards, install and run the school library, supply drinking water and drainage.

IVORY COAST Support: National government

This educational program relies on such nonformal techniques as peer-teaching and television to achieve its ends. Primary-school classes are divided into peer groups that work with each other on televised materials, thus enabling teachers to supervise more classes. This method results in a net cost reduction in teachers' salaries.

LIBERIA Support: AID, national government

Pilot project to develop village schools. Local villages supplied site, basic materials and unskilled labor. National government supplied construction materials, skilled labor, teaching and supervisory staff. AID provided

furniture, supplies, texts, advisors, and teacher training. Primary need is for a trained person to act as catalyst, or dynamic local leader.

MALAYSIA Support: Local

During colonial days there were several kinds of community-supported schools: the Native Voluntary (or People's Schools), the Chinese schools, and the Indian schools.

MEXICO Support: Public, Seguro Social

Mexico's Social Security system is funded by a highly successful, very old, national lottery system.

MEXICO Support: Inter-American Foundation and local credit

The Centro de Estudios Generales in Chihuahua, Mexico, works in a 15,000-inhabitant slum on two self-help projects: COMI (Centro de Orientacion Materno-Infantil) is a preventive-care under-fives clinic based on David Morley's theories of weight and malnutrition. The clinic is attempting to become self-supporting by collecting, sorting, selling, and re-cycling the community garbage, which is not otherwise collected. The other project is a housing construction workshop whose members make and sell housing elements.

MEXICO Support: Inter-American Foundation

The Grupo de Credito La Petaca in Guanajuato, Mexico, has purchased a tractor with IAF funds. With it they will clear more land, increase their agricultural production, and, over a five-year period, put the cost of the tractor into a revolving loan fund which they will manage in support of other collective community projects.

MOZAMBIQUE Support: Local, government

The aldeias comunais are centers of a collective production project of the rural population of Mozambique. The project's goals are better living conditions, improved education for children and adults, health and sanitary services, and the development of economic activities. Each aldeia has a political and cultural center, a police station, an administration and production control center, a school, and a center for handicraft and small industry. Each also produces most of the food necessary for those in the projects.

NICARAGUA Support: Local and AID

This is an AID-supported project to help INDE (the Nicaraguan Development Institute) with its Community Development Resources. Between 1967 and 1977, 820 projects were developed, which included building classrooms, schools, clinics, bridges, walls, and community centers.

PERU — Support: Local and provincial governments

In the province of Puno, a program for delivery of services includes the traditional Indian community ownership and responsibility. Economic development is based on the revival of silver mining and improvement of pastoral industry, crafts, and local family food production. There is a policy of communal and "social" property. Part of the revenue from social property must go to support community services such as a program for pre-school children which will later be expanded into a formal primary-school program.

PERU — Support: Local and Ministry of Agriculture

As a consequence of Peru's land reform laws, regional central cooperatives were established under the aegis of the Ministry of Agriculture. Investments in the economic infrastructure as well as social programs (including education) are to be planned and executed by these co-ops. Whereas formerly schools were supported by the hacendados, they are now the responsibility of the co-ops, which employ teachers and provide buildings from the assets of the collective ownership of the co-ops.

PHILIPPINES — Support: Private organizations

The Katiwala project for a squatter community is a pre-paid health program in which local villagers are trained as medical auxiliaries. An outgrowth of the clinical activities is a sewing workshop in which women of the health cooperative (the paramedics and others) are paid a regular wage for

their work. Proceeds over and above the women's wages are contributed to the cooperative to help underwrite the cost of medicines.

PHILIPPINES — Support: Local and Church

The Tinisiwan Farmers' Self-Help Association was created to promote the social awareness of members and their capacity to govern the local community. The Association is responsible for introducing the collective marketing of copra and charcoal, and for creating a consumer store and communal farming project.

TANZANIA — Support: Government and local

This "villagization" project is a result of the government's policy of providing minimal essential services to all the people. Top priority is given to providing water, basic health services, and universal free primary education.

APPENDIX C

Profiles of Three Radio Schools

Published by

Clearinghouse on Development Communication
1414 Twenty-Second Street, N.W.
Washington, D.C. 20037

RADIO MATHEMATICS
Nicaragua

TARGET AUDIENCE:	Primary-school children in Nicaragua
OBJECTIVE:	To develop a prototypical system for teaching elementary mathematics
MEDIA:	Radio, reinforced by classroom instruction and printed materials
DONORS/SPONSORS:	The Technical Assistance Bureau of the U.S. Agency for International Development; the Government of Nicaragua
DURATION:	Initiated in July of 1973; ongoing through June of 1979
CONTACTS:	Ms. Jamesine Friend, Apdos. 122, Masaya, Nicaragua; Dr. Barbara Searle, Institute for Mathematical Studies in the Social Sciences, Ventura Hall, Stanford University, Stanford, CA 94505, U.S.A.

DESCRIPTION:

The Radio Mathematics Project is an attempt to design and broadcast elementary math lessons that hold children's interest. One part of the project is curriculum development. Another is the creation of a way to use performance data to revise and improve the lessons. A third is the analysis of the mathematical skills and concepts taught in the lessons. Underlying all three activities is the development of radio as an instructional medium.

The project began in July of 1973. Once the staff had selected the site, it prepared a detailed research plan and tested sample lessons in California schools. By mid-1974, the Nicaragua office was organized and was developing both achievement tests and procedures for the program. By 1975, 150 lessons were being used in 16 experimental classrooms. More than 85 first and second-grade classes were using the radio math lessons as of the summer of 1976.

Each radio math lesson consists of a 30-minute recorded portion and a post-broadcast portion conducted by the classroom teacher with the help of a two-to-three-page guide. A typical lesson consists of many discrete instructional and entertainment segments, all but a few of which require an average of four active responses (writing answers, responding aloud, singing) per minute from the student. The lessons rely on little direct explanation, cover many topics, and elicit several kinds of responses from the children. Post-broadcast activities take up at least 30 minutes and involve use of the blackboard. Until 1975, worksheets were also part of almost every lesson.

RESULTS:

A year-end achievement test given in 1975 showed that children in classes that used the radio math series scored 21 percent higher than their peers who studied math in a traditional learning environment. The second-year evaluation revealed an even greater disparity. First-graders performed 60 percent better than their counterparts in the control group, while second-graders had a 29 percent edge over their counterparts.

At the close of the 1975 school year, 73 percent of the participating teachers said that the children in the radio math program learned more than they would have in the conventional classroom. Ninety-two percent voiced the hope that the radio instruction program would continue.

With AID support, the *Radio Mathematics Project* has been extended through June 1979. Current efforts revolve around revising the curriculum, experimenting in the use of radio instruction without the worksheet component in order to cut costs, and extending the radio project to include students in higher grades.

OF NOTE:

- One lesson in the *Radio Mathematics* series was awarded the Japan Prize in the 11th bi-yearly International Educational Programme Contest, to which 92 organizations from around the world submitted entries.
- The *Radio Mathematics Project* was expanded at the behest of the Nicaraguan Ministry of Education to bring radio lessons to three different departments of the country.
- At least once a minute in every radio program, students are invited to respond actively to what they hear.
- Bottle caps and other locally available cost-free items are used in the classroom as counting aids.

REFERENCES:

"The Radio Mathematics Project: Nicaragua 1974-1975," Barbara Searle, Jamesine Friend, and Patrick Suppes, Institute for Mathematical Studies in the Social Sciences, Stanford University, Stanford, California, 1976.

"Evaluation of The Radio Mathematics Project," Barbara Searle, Paul Matthews, Jamesine Friend, and Patrick Suppes, unpublished, October 1976.

Clearinghouse on Development Communication
June 1977

TARAHUMARA RADIO SCHOOLS
Mexico

TARGET AUDIENCE:	Children and other residents of the Tarahumara Sierra (especially its 50,000 Indians)
OBJECTIVES:	To meet the practical and academic needs of Tarahumaran Indian children and adults by increasing their social and employment opportunities while reinforcing their cultural identity
MEDIA:	Radio (until 1974), printed materials, and interpersonal communication
DONORS/SPONSORS:	The Catholic Church as represented by the Vicar Apostolic of the Tarahumara region; limited support from agencies of the Mexican Government
DURATION:	Begun in 1955 as extensions of the 50-year-old Jesuit-run educational programs; granted legal status as a part of Mexico City's Iberoamerican University in 1957; ongoing in modified form (without radio)
CONTACTS:	Director, Jesuit Mission Headquarters, Sisoguichi, México; Sylvia Schmelkes de Sotelo, Centro de Estudios Educativos, Avenida Revolución 1291, México 20, D.F. México; Dean T. Jamison, The World Bank, 1818 H St., N.W., Washington, D.C. 20433, U.S.A.

DESCRIPTION:

The *Tarahumara Radio Schools (TRSs)* have roots in the Jesuit missions that have operated in the Sierra Tarahumara since 1900. But while the charter of the children's boarding school that opened in 1900 called for the eradication of "barbarism, pagan atmosphere, and ignorance," the schools have not weathered pedagogical revolutions unfazed. Emphasis now falls upon practical education informed by Freirean precepts — though the sobering difference between goals and achievements, particularly with respect to reaching the target audience, cannot be denied.

The 1970s have been uneasy times for the *TRSs*. Alarmed by high dropout and absentee rates and aware that the schools were benefitting primarily the Spanish-speaking population rather than the Indians for whom they were principally intended, *TRS* project authorities asked the Centro de Estudios Educativos to assess the schools' impact. In 1971, members of this Mexico City-based research organization visited the Sierra Tarahumara to collect information on *TRS* teachers, students, graduates, and the families of students. To redefine the objectives and functions of the schools, they had first to calculate the true impact of existing objectives and functions.

At the time of the study, 46 schools that together served 1,081 students dotted the ten Sierran municipalities. Each school had one or two auxiliary teachers. These auxiliaries, themselves educated only through primary school, organized the classes around radio broadcasts (of government-selected curricula) transmitted centrally from mission headquarters in Sisoguichi, counselled students and checked their work, and attended summer training courses in teaching methods and the subjects they taught. The classrooms they supervised typically contained students of all four primary grades. To accommodate the mixed needs of all students, the radio programming covered a different subject each hour, devoting 15 minutes to each grade level. Students tuned in for one quarter-hour segment each hour, completing written exercises for the remaining 45 minutes until a new subject was taken up. Five of the 46 schools open in 1971 were boarding schools whose students returned home on the weekends.

Several sweeping changes had taken place by 1975, the most important of which was that radio use was dropped entirely. In addition, summer courses for auxiliary teachers had replaced the goal of proficiency in subject matter and methodology with that of mastery of local customs and language. New bilingual teaching methods had been put into use, the unintegrated schools had been shut down, and both school supervision and materials had been upgraded.

RESULTS:

While the lengthy statistical and analytical evaluation conducted in 1971 showed that the *TRSs* prepare fourth-grade students about as well as do schools in the capital, such a tiny proportion of *TRS* students finish the fourth grade that the more important questions relate to the determinants of enrollment in and completion of the courses. To answer such questions, the research team identified many predictors of success in the children's socioeconomic environment.

Tarahumara Indians, few of whom speak Spanish and thus comprehend the Spanish broadcasts, fared less well than their non-Indian peers in overall mean achievement (in language but not arithmetic skills) and were much more likely than their counterparts to fall farther behind as they advanced through the grades. These results, researchers contend, together suggest that cultural and linguistic factors militated against Indian children in the program. Variables that correlated with interyear dropout rates included opportunity costs (what it costs to replace or do without a child's help at home or work), the level of the child's father's education, and the child's ethnic background. To the population sample, education appeared to have more to do with prestige or with some notion of school as an innate good than with the expansion of employment opportunities — a finding confirmed by employment data as well as by interviews with students, graduates, and their families.

The evaluation, which was used as a basis for some of the changes made in the program in the early 1970s, also covered teachers' qualifications and duties, school policies, and the curriculum.

OF NOTE:

- Since 1971 the Tarahumara Sierra has been the site of Presidential visits and of development activities sponsored by the National Indian Institute, the Administrative Committee for the Federal Program of School Construction (which has built boarding schools to prepare Tarahumaran community-development workers), the Ministry of Public Works, and the National Institute of Rural Community Development. The thrust of the projects initiated by these agencies is toward the integration of the Tarahumara into Mexico's national life.
- Radio use was discontinued partly because delays caused by equipment failures interrupted the flow of instruction.
- One reason the reforms proposed after the 1971 study failed is that missionaries with 15 years of experience in the radio schools were understandably leery of adopting sweeping changes suggested by outsiders. They also resisted the idea of shifting the program's emphasis away from reaching young children.
- Although designed from the beginning to serve young children in a formal school setting, the *TRSs* were influenced by Colombia's *Radio Sutatenza* — a nonformal education program primarily for adult *campesinos*.
- Some of the factors that have governed the evolution and reform of this project are those that impede "education for development" in many Third World countries. The Sierra Tarahumara is an agricultural region, one of Mexico's remotest and most mountainous areas. Its dispersed population consists of Indian and non-Indian (mainly *mestizo*) groups that have not mixed except in commerce, and its resources have been exploited primarily by non-Indians and outside companies.

REFERENCES:

"The Radio Schools of the Tarahumara, Mexico: An Evaluation," Sylvia Schmelkes de Sotelo, *Radio for Education and Development: Case Studies*, Volume I, World Bank Staff Working Paper No. 266, May 1977.

Radio For Education and Development, Dean T. Jamison and Emile G. McAnany, Sage Publications, 1978.

Clearinghouse on Development Communication
July 1978

RADIOPRIMARIA
Mexico

TARGET AUDIENCE:	Primary-school children (especially fourth-, fifth-, and sixth-graders) in the environs of the city of San Luis Potosí (approximately 2,075 children in 1975)
OBJECTIVES:	To increase the number of primary-school children served by six-grade primary schools without increasing the cost of the public educational system
MEDIA:	Radio, print, some visual aids, and interpersonal communication
DONORS/SPONSORS:	Mexico's Secretariat for Public Education
DURATION:	Begun in 1970 after a one-year pilot; ongoing
CONTACTS:	Concepción Rivera Guzmán, Directora, *Radioprimaria*, Dirección General de Educación Audiovisual, Calzada Circunvalación y Tabiqueros, México 2, D.F.; Peter L. Spain, Institute for Communication Research, Stanford University, Stanford, CA 94306, U.S.A.

DESCRIPTION:

Radioprimaria is a response to a shortage of teachers that is itself a reflection of a shortage of education funds. It was designed by Mexico's Secretariat for Public Education (SEP) to increase the number of Mexican primary schools at which instruction at all six grade-levels is offered. In practical terms, it enables one teacher to handle the three higher grades by shifting part of the teaching burden to the radio. The governing idea is that four teachers plus educational radio broadcasts can do the work of six teachers and do it at a relatively low total cost. The radio is not supposed to replace or displace classroom teachers but to buttress and to extend their efforts. It was originally intended to permit four- and five-grade schools to offer the complete primary curriculum and primary certificates.

The instructional radio lessons are prepared by eight radio teachers in DGEAD's (Dirección General de Educación Audiovisual y Divulgación) broadcast studios in Mexico City. They are then bussed 260 miles northwest to Station XEXQ at the University of San Luis Potosí, which broadcasts them without charge from 9:00 a.m. to 1:45 p.m. on Monday through Friday. These lessons typically occupy 90 minutes of each five-hour school day. Eighty percent of them are directed toward all three upper grades, while the remaining 20 percent are geared toward specific grades. All make repeated reference to the textbooks distributed free by SEP to all Mexican primary schools, all are discussed in a fortnightly mimeographed teacher's guide and program schedule ("Correo de *Radioprimaria*"), and a few are accompanied by visual aids. The 1,250 programs needed for a school year are broadcast at the rate of five or six per day and focus on Spanish, arithmetic, history, and geography, covering nature studies, practical activities, and physical education in less depth.

Radio-classroom teachers, most of whom commute either daily or weekly between their homes in the city and the rural communities they serve, are given an introduction to the *Radioprimaria* system, but teacher turnover is so great that some confusion and misunderstanding on their part is inevitable. Similarly, they are supposed to be subject to supervision and periodic on-the-job inspections, but controls have been exercised in a hit-and-miss fashion. On the other hand, much is required of both the inspectors and the teachers. Inspectors, for example, are expected to furnish their own transportation for use on the job, while many teachers personally supply the classroom radio. Neither transportation nor radio maintenance is provided systematically by SEP.

Enrollment in *Radioprimaria* has fluctuated. Originally, 49 schools (and some 2,800 children) representative of those eventually to be served by a nationwide *Radioprimaria* system were involved in the program. The number of involved schools dropped for several consecutive years before climbing to 65 in 1975. However, the *Radioprimaria* lessons are now directed only at fifth-graders, so the total number of children reached by *Radioprimaria* is smaller (2,075).

Other changes of importance are the switch to a larger radio transmitter in 1973, which expanded *Radioprimaria's* reach by 20 to 40 kilometers in all directions, and the introduction of a new lesson format in 1974 that features dramatized interchanges between teachers and students instead of lectures.

RESULTS:

The lack of strictly comparable control groups, reliable enrollment statistics, and other evaluative tools clouds the meaning of data on *Radioprimaria's* impact. However, investigations of the project's effectiveness have been quite far-reaching, taking into account community attitudes toward education in general, employment patterns and prospects, and both technical and administrative pitfalls, as well as test scores and other conventional indicators of educational success.

Children in the radio classrooms perform at least as well as their counterparts in regular classrooms do on standardized achievement tests. But this finding must be viewed in light of the fact that the great majority of radio classes (an estimated 80 percent) are in schools that had six grades before the project began (and are thus not the intended beneficiaries). Moreover, power failures, other technical problems, a lack of administrative guidance, shortages of resources, and teachers' reluctance to use the system have all militated against *Radioprimaria's* success. When 44 radio schools were visited by evaluators in 1972, for example, one was inexplicably closed while 18 others were not making use of the radio lessons.

Surveys conducted in 1972 of teachers' pedagogical beliefs, the activities of primary-school graduates in the San Luis Potosí area, attitudes of rural people in the area toward rural education, and the local job market revealed that students, their families, their teachers and their prospective employers regard a primary certificate as an employment credential that is necessary but not sufficient. These studies showed that few primary-school graduates make practical use of their educations and that while most do not leave their hometowns, the few who do move to the city cannot expect their schooling to win them jobs in an employment market flooded with secondary-school graduates.

OF NOTE:

- Most lessons are used year after year, so a child who has spent three years in a radio classroom has heard some of the taped broadcasts three times.
- Before 1975 (the last year the project covered students other than fifth-graders), students in radio classrooms were expected to engage in private study while lessons not intended for their grade were broadcast.
- Well over one hundred schools request the *Correo*, even though only 65 of them make use of the radio broadcast. Apparently, the *Correo* helps teachers in ordinary classrooms prepare their courses.
- An objective of *Radioprimaria* at the project's outset was to extend educational opportunities via radio to people over 15 who had not finished primary school. Nothing has been done to realize this objective, however.
- Although public education commands the largest single share of Mexico's national budget, only about a fifth of Mexico's primary schools have the full six grades.
- *Radioprimaria* is thought to have a large incidental audience composed of adult listeners in Mexico City and San Luis Potosí. Some broadcasts are also picked up by classrooms not involved in the program, though the number is not known.

REFERENCES:

"The Mexican *Radioprimaria* Project," Peter L. Spain, *Radio for Education and Development: Case Studies*, Vol. I, World Bank Staff Working Paper No. 266, May 1977.

Radio for Education and Development, Dean T. Jamison and Emile G. McAnany, Sage Publications, 1978.

Clearinghouse on Development Communication
July 1978

APPENDIX D

'99.

103 As part of a self-help program, students in the Philippines Barrio School Project raise and sell piglets to help pay school fees and defray other educational costs. 104

BEST COPY AVAILABLE

APPENDIX E

For African children the village community is one big family of teachers

by A. Babs Fafunwa

LEARNING starts early for children in Africa, and more often than not begins at the mother's breast. Fed regularly, weaned when the time is ripe, the African child spends the first five years of its life in a close relationship with its mother. During this early stage, the child is reared by the mother, not by the family as a whole.

In a polygamous African family, there may be several "mothers"; and they all play a part in caring for the youngest generation. But ultimate responsibility for each child lies with its true mother, who carries it on her back wherever she goes, puts it to bed, looks after it when it is ill, and teaches it to speak. Full of curiosity, the baby watches her every gesture, and learns to interpret her smiles, her frowns and her tears.

Little by little, this lively curiosity reaches out beyond the mother's world. Somewhere between the ages of four and six, the grandparents—and sometimes uncles and aunts—begin to take part in the children's education, sending them on little errands, teaching them to be obedient and to respect their elders (this is a very important matter in African society), and to observe certain rules of behaviour. The grandparents also teach them the history of their family or of their people.

African education is "global". In other words, each social institution has a role in providing the moral and practical teaching that will enable young boys and girls to take their rightful place in the community.

The traditional educational system is based on age-groups, or on affinities within these groups, whose limits are defined differently by different peoples.

Age is very important to Africans. It confers economic and social privileges, particularly as far as the distribution of prey, rewards and wealth are concerned. In many Nigerian ethnic groups, men—and women, too—tend to claim that they are older than they really are.

The objectives of traditional African education are many and varied, but the ultimate goal is to produce individuals who are honest, respectful, clever, co-operative and mindful of the established order. Character training is, in fact, the keystone of the system.

African children love to explore their immediate surroundings, to observe and imitate the actions of adults and to discover new horizons. In this, they are no different from other children, whether in Europe, Asia or elsewhere. What distinguishes them is their way of doing things, and above all the spontaneity with which, in societies that have retained their links with the past, they jump about, climb trees, dance or move to a rhythm, simply because their brothers and sisters or their elders are doing so. No sooner, in fact, have they discovered their limbs, than they discover how to use them.

African children perhaps differ from their European counterparts in that they have completely untrammelled access to the stimulating world of music and dance. The movements of the African dance, in their infinite variety, offer the best possible physical exercise for growing bodies. No teacher or dancing-master is needed: the children join in naturally, following the steps of adults or other children. Dancing and music are also a means of transmitting the culture of a people, and of performing together as a group.

In a study of the Yorubas of West Africa, M.A. Fadipe has described certain practical aspects of the education of young children:

"As soon as her daughter is of age, it is the mother's duty to teach her the rules of hygienic and well-mannered behaviour observed by the group. One of the most important of these rules concerns the use of the right and the left hand.

"Before the whites brought their culture to Africa, the use of forks and spoons was unknown. The right hand was traditionally used for lifting food to the mouth and—mainly for this reason—was forbidden to touch unclean objects...

"A child caught eating before early-morning ablutions—which involved at least washing the face and mouth—would be scolded and punished by an adult member of the group...

"The 'indirect' education received by the child in the community is almost as important as that received at school."

"In certain regions of northern Nigeria," writes another specialist, "character training took many forms. Parents encouraged healthy rivalry between children of the same age—sometimes as early as the age of five—by organizing wrestling matches and by setting the children competitive tasks.

"Fair play was also encouraged; winners and losers alike were congratulated when they played well. The main thing was not winning and losing, but playing the game. With the introduction of Islam, the Koranic schools brought additional elements of character training. Children were sent to the Mallam for three or four hours every afternoon, to learn the Koran by heart, together with the principles of Islamic ethics."

Traditional education, as far as character-building was concerned, was certainly severe, to say the least. But this was because of the importance which African society attaches to this aspect of education. The habit of physical exercise, apprenticeship in a trade, a religious upbringing, a respectful attitude towards one's elders and active participation in community life are indispensable conditions for any African wishing to be considered a person of consequence. The lack of more formal education can be forgiven, but a person who does not fulfil these conditions inflicts the worst possible humiliation on both his immediate family and his more distant kinsfolk.

A. BABS FAFUNWA, *Nigerian educator, is professor of education at the University of Ife, Ibadan, and was formerly professor and dean of the faculty of education at the University of Nigeria, Nsukka. He is the author of several published works on African education, including* New Perspectives in African Education *(Macmillan, Nigeria, 1967) and a* History of Education in Nigeria *(Allen and Unwin, London, 1974).*

Respect for one's elders, which is an important part of character training, includes respect for all who represent authority: village chiefs, religious leaders, soothsayers, uncles, relatives and neighbours. Styles of greeting play an essential role in the expression of respect. Salutation is a complicated affair in Africa, with different modes for addressing relatives, elders, equals, chiefs, and so on, and special greetings for morning, afternoon and evening.

There are different formulae for games, dancing or drumming, for sitting or standing, for tilling the soil or fishing, for weaving, swimming, walking or recovering from an illness. Anniversaries, funerals or weddings, yam-growing ceremonies, the rituals of ancestor-worship, the *Egungun* festivals and other special occasions—all call for special types of greeting.

If "intelligence" means the capacity to assimilate experience, and if "intellectualization" denotes abstract reasoning—as in the formation of concepts or judgments—then it may be said that traditional African education encourages intellectual development. Observation, imitation and participation are three pillars of the educational process.

African children and adolescents learn the geography and history of their community. They know their local hills and valleys like the backs of their hands; they know where the land is fertile and where it is barren. They know when to expect rain and when to expect drought. They know the right times to hunt and fish. In every family the old people are teachers of local history. The songs of praise which often commemorate great events enrich the oral tradition, creating an experience which it is difficult to forget.

Botany and zoology are the subjects of both theoretical and practical lessons, in which special attention is paid to local plants and animals. Where animals are both a source of danger and a means of livelihood, their behaviour is another important subject of study.

Proverbs and riddles are exceptional wit-sharpeners, and are used to teach the child to reason and to take decisions. (See page 16, and also "Unesco Courier", May 1977).

Yoruba mathematics are particularly interesting. According to C.A. Taiwo, a Nigerian educator, "The Yoruba have created their own system of arithmetic and use a wide range of real-life situations to develop skills of numeracy. At a very early age, Yoruba children learn to count with the aid of objects, rhymes and games, both at home and in the fields.

"The use of cowrie shells for currency offers good practice in counting. The Yoruba have a different name for every number, whatever its size. The name itself may be long and complicated, but the meaning is precise, and no number is too large or too small to be deciphered by a Yoruba".

On the subject of cardinal and ordinal numbers, Taiwo observes: "The Yoruba understand the concepts, just as they understand the mechanisms of certain fractions, of addition, subtraction and multiplication. Eleven is *one-plus-ten*; fifteen is *twenty-minus-five*; forty-three is *three-and-twice-twenty*".

The Nupe of Nigeria have a similar system, which is elaborate, lucid, practical and unlimited in its application. According to S.F. Nadel, author of *A Black Byzantium: The Kingdom of Nupe in Nigeria*, "A number such as 3,600,000 is expressed as 'two-thousand-times-eighteen-hundred', or—in greater detail—'two-thousand-times-two-hundred-times-nine'... Four hundred is 'two-hundred-times-two', and so on...".

The same author writes: "The area of farms is measured by the number of heaps of yams they can produce. Volumes are expressed in 'liquid' or 'dry' measures, the units being calabashes, gourds and—in more recent times—tin cups and tin cans." Most Nigerian tribes use similar systems of measurement. Africans also have fun with their mathematics in games of skill, such as the "Ayo" game where players must outwit their opponents in addition, subtraction, multiplication and division.

Some educators have come to believe that certain espects of traditional African education should be integrated into the modern system, and have begun to work along these lines. This is a field which should be given priority in all developing countries.

One of the aims of education, whether modern or traditional, is to perpetuate a given culture. Traditional Africa sets great store by this aspect of human development.

As they grow up, children of traditional societies absorb and assimilate their peoples' cultural heritage, without formal teaching. They observe, imitate and mimic the

During the first few years of life, an African child develops a very close relationship with its mother and, like this Togolese infant (left), is carried on her back wherever she goes. One of the earliest lessons an African child learns is respect for his elders. Among the Dogons of Mali (above right) the word of the patriarch of the family is accepted without question.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Photo : Pierre Pittet, WHO, Geneva

ctions of their elders and their siblings. hey attend baptisms, religious ceremo-es, weddings and funerals, the corona-ons of kings or chiefs, and the annual yam stival. They watch the acrobatic displays f guilds and associations, often joining in ith members of their own age-group or ith their families.

As we have already pointed out, respon-bility for the upbringing of young Africans traditionally shared by the entire social roup. Good manners, conventions, cus-oms, moral rules and social laws are incul-ated by close relatives, by more distant embers of the extended family or by eighbours. The hallmarks of a successful raditional education in Africa are honesty, erseverance and sincerity.

Today, however, African society—and s children—face a dilemma.

From birth to the age of five, African hildren are invariably brought up in the raditional environment. But from the age f six onwards, between one-third and ne-tenth of all these children (depending n the country) enter another educational system, which is almost totally different. After spending their early years in a world which has its own methods of transmitting knowledge, they suddenly find themselves in another world, whose concepts are by no means the same. This phenomenon has not received the attention it deserves from educators and psychologists.

We tend to assume that African children make this dramatic transition without difficulty, and we expect them to react just like little English, American or German boys and girls. But the fact is that their perceptive balance is upset, and this abnormal situation (for there is a world of difference between the "non-formal" traditional system and the "formal" Western system of education) tends to retard the process of learning as it normally occurs in the Western context.

More than half of all the children who enter primary schools in Africa fail to complete the course. A number of studies on "primary school failures" in Nigeria and elsewhere attribute this wastage, which ranges between 40 per cent and 60 per cent according to country, to three factors: the premature introduction of English as the language of instruction in primary schools; inadequate teacher training; and the shortcomings of the educational means and methods employed (due primarily to their "alien" nature).

Of all the children in the world, only those of African countries (and certain former colonial countries in Asia and Latin America) are obliged to learn in a language other than their mother tongue. In some developing countries children are educated in their mother tongue during the first two or three years of primary schooling, but after this they must adopt either English or French.

There is every reason to suppose that the early introduction of a second, "foreign" language obstructs the process of learning and is at least partly responsible, in the developing countries, for the high drop-out rates from primary and university education alike.

If one of the essential objectives of education is to transmit a culture—and by this we mean the culture specific to the child

and to his or her particular social group, then it must be said that most educators and psychologists in the developing countries have not made enough efforts to establish a link between the school and society. In most African countries today, there is a lack of continuity between the family and the school. A four-year-old Kenyan boy described his experience in these terms.

"I was not yet four years old when my sister was born... Although I was still very young, I had to become my sister's nurse for days on end. So that I should do the job properly, my mother had to teach me what to do, give me instructions and see how I carried them out.

"First I had to do things while she watched: feeding the baby, for example. That took us up to planting-time the following year; and then, because my mother had more work to do, I had to do more things with the baby.

"The day began with morning jobs for all the family—for everyone, that is, except the baby... My father took out the animals—the cows, goats and sheep... Mother went to fetch water from the river, and cleaned the house... My job was to collect fire from the neighbours, and lay or light our own fire...

"Finally, before she went off to the *shamba*, mother gave me my instructions: 'Don't leave the house unattended,' she said, 'in case of thieves. Don't let Alusa (the baby) cry for too long, it will make her ill. Feed her when she cries. Keep stray cats away from the hens, and watch out for hawks over the chickens. Be polite with visitors and with strangers who ask the way'...

"Last of all, she promised to bring me a present—a fruit or a sweet potato—when she returned. And then she went off to work, and it was late in the evening when she came home..."

The experience of this little boy in East Africa should bring home to educators, psychologists and educational planners the urgent need to provide continuity between the child's domestic and scholastic experience, so that schools and homes in Africa are truly linked.

In most African countries, the first task is to provide free primary education that is valid for all the children. There is no need for these countries to cling to the methods employed up to now, which are very costly; there is ample room for innovation in the context of development.

Another urgent task is to harmonize the traditional and modern systems of tion, each of which can make an im contribution to the upbringing of children. Research and experime are called for here, and althoug developing country will have to de own objectives, and to direct its accordingly, three subjects app deserve close attention: the impact tional education on "formal" sch the ways in which African childre and the relationship between bilin and education.

Children between the age of one must be given real opportunities o ing outside the "formal" system should take over at the age of five This calls for government planning informal level, in order to make the tion to the formal system less traun

In a typical traditional African education is not divided into wa compartments. Children and adults, during the development c vocational aptitudes, pass imperc from one stage to the next. Som quickly; others need more time. system which we envisage for the loping countries in the coming deca permit children and adults alike to l their own rhythm, whatever their ag level of education or specialized sub study.

■ A. Baba

BEST COPY AVAILABLE

Pupils of nature

The outdoor world is a natural class where many African children expres creative imagination through such pursuits as dancing, music, hunting exploring. The spontaneous moveme the dance are an ideal form of exerc growing bodies, as well as providing entertainment for friends who prefe it out (right). All youngsters are natu scientists by inclination, and like thi Cameroonian boy (left) love to exam insect life at close quarters

What's in a game?

How the children of Zaire play to learn

by Kimenga Masoka

In Zaire, compulsory education starts when children enter primary school at the age of six. Organized facilities for pre-school education, which begins at the age of three, are still limited despite efforts made in recent years to increase the number of nursery schools. (According to Unesco statistics, Zaire had only 211 pre-school institutions in 1972). But the shortage of schools does not mean that there is any lack of pre-school education in Zaire. On the contrary, learning through play forms part of the traditional pattern of life.

CHILDREN are children all over the world... And all over the world children play games... In different ways perhaps... But then, a game is just a game anywhere!

Or is it? A closer look seems to show that there is something special about the games Zairian children play. Children in other parts of the world, who go to kindergartens, nursery schools and the like, learn as they play. Zairian youngsters play in order to learn, showing in their games their sense of creativity.

At the age of three, and newly-weaned (like many African children, they are breast-fed until relatively late), they are ready to assert their independence. They are free to join the other children of their own age or older. They have plenty of time on their hands, and thousands of wonderful ideas about how to occupy it. So what do they do?

First of all, they make toys.

A group of children is usually led by the oldest and most authoritative member of the group: all the other children must obey him as long as the game lasts; according to African custom the young must always show respect and obedience to their elders, who represent traditional values.

To begin with, the group splits up, and each child goes off on his own. It is interesting to note the different ways in which they behave. As they scatter into the countryside they will pick a cob of maize or some mango leaves, hack off the branches of a palm-tree or try to knock some oranges off an orange-tree. Then one by one they return to their usual playground (under the trees of a courtyard) carrying their booty. Each child settles down on his own little patch of ground and tries to make something out of his spoils.

First there is a long period of intense concentration during which scarcely a word is spoken. Then gradually, the children start to move around—here a knife is borrowed, there a bamboo cane is swapped for a strip of liana. Soon the work begins in earnest.

Generally the children try to make familiar objects that appeal to them but are hard to come by—a model train, an aeroplane, a car, a house, a telephone, a doll, a saucepan, a pipe, or certain types of games similar to draughts. Yet these objects are never exact copies of the real thing; the children always do their best to add a personal touch so that once they have finished they can say: "I made that".

I remember watching a five-and-a-half-year-old child from a modest family make a telephone from a piece of liana about 10 metres long and two boxes made of mango leaves. He put it together by attaching the ends of the liana to the two boxes. Once he had firmly tied the knots, he laid his apparatus out on the ground lengthwise and asked one of his school friends to pick up the box at the other end of the liana and hold it to his ear.

When he spoke into his own box, the other boy exclaimed: "It's amazing! I can hear everything you're saying along the liana!" When I asked the first boy if what he had made was a telephone, he denied that it was any such thing. It was his own personal invention, he retorted, and he would give it a name in his own good time.

Play is widely used in Africa as a means of teaching children the basic traditional

KIMENGA MASOKA, *a staff member of the National University of Zaire, is currently preparing a doctoral thesis in applied psychology for the University of Paris. He is the author of several studies on African psychology which have appeared in Zairian publications.*

BEST COPY AVAILABLE

The effort of concentration and co-ordination is written on the faces of these two miniature maestros as they beat out the rhythm of a Sapende dance, at Kilembé, Zaire. Their instrument, a hollowed-out tree trunk, is a drum used for transmitting long-distance messages.

elements of their culture. This is the second important function of play.

According to one African belief, children should not be told stories during the daytime, in case they stop growing. It is only in the evening that adults interrupt their children's games and teach them proverbs or tell them stories.

All kinds of instruction and knowledge are passed on via proverbs and tales. "The cola nut in grandfather's mouth" is not merely a warning against the bitterness of the cola nut, which adults like to chew. It also carries another message: don't imitate grown-ups. Slavish imitation is as silly as it is dangerous. "The palm nut falls from its cluster only when it is ripe." In other words, you should not go it alone in life until you, too, are ripe (See *Unesco Courier*, April 1977).

Zairian children, like children all over the world, tend to copy adults. But only up to a point; traditional wisdom makes a subtle distinction between aimless aping of adults' behaviour or attitudes and the kind

self for life and broadening one's knowledge. Here again, play has its contribution to make, with the full co-operation of adults.

Fishing and hunting—naturally among the most exciting kind of games—involve the same imitative, or rather educative process. The children only hunt grasshoppers, rats and birds, but they have to make their own bows and arrows out of bamboo, strips of palm-wood and liana. They only fish for small fry in flood water during the rainy season, but they have to fashion their own hooks and dig up their earthworm bait.

Singing and dancing form an integral part of all these activities. If pre-school education of this kind doesn't bring out a child's intelligence, sensibility, creativity and physical gifts then nothing will. What's more, Zairian children play not only to learn about the world, but also to discover themselves. Take "nzembo", for instance, one of their favourite games.

"Nzembo" consists of making music

out into a shallow part of a river. Another child hums a tune and tells them to play it; like a conductor, he allots various tasks to each member of his orchestra so as to get an accurate rendering of the tune. He gives his musicians a starting note, and at a signal from him they start to play.

How, you may ask, does one "play" a river? The musicians plunge their clenched fists into the water, smacking the surface of the river as hard as they can, producing very low rhythmical sounds as they hit the water which are like the sounds of the tom-tom. Indeed, so catchy and rhythmical is this music that the other children on the river bank join in and dance.

...Once upon a time, in far away Zaire, there lived a three-year-old musician whose favourite instrument was a river. Standing in the water he would coax music from the water with his hands...

What a wonderful story to tell the children of Europe—at bedtime, so as not to stop them growing.

APPENDIX F

Description of the approach used by Credit Union National Association, Inc. to finance community services in rural areas.

Supplied by

Credit Union National Association, Inc.
1120 19th Street, N.W.
Washington, D.C. 20036

DESCRIPTION OF CREDIT UNION SELF-FINANCING SERVICE SYSTEM

1. Basic Service Unit

The credit union, a member-owned and member-managed financial institution, constitutes the basic service unit. The primary function of this institution is to provide its membership with savings and credit services normally not available from other sources.

2. Self-Financing of Basic Unit

Two elements are crucial in the development of any credit union: (1) the members' voluntary investment of a portion of their own household savings to create a jointly-controlled fund of working capital which serves as a source of short-term credit for individual members in time of need and (2) the active and democratic participation of members of the union in the institution's management on a voluntary basis.

The funds that are accumulated at the credit union level are lent out to individual members in time of need. Each loan must be approved by the member-run credit committee. Normally, the borrower need not pledge more than he has in savings in the credit union to secure his loan. Member borrowers are required to pay interest on their loan and to repay it and the loan principal promptly. The interest rates charged vary from credit union to credit union depending on the dictates of custom, the rate of inflation, the degree of risk associated with the loan and the level of complementary services (member education, technical assistance, input supply, marketing, etc.) provided to

members. The rates normally range from the traditional 12% to about 30% per year.

The repayment of the loan replenishes the member-controlled credit fund for further lending. The payment of interest on the loan, on the other hand, is used to cover the money costs of operating the credit service. Any revenue remaining is then returned to members as dividends on their invested savings and/or reserved for financing future credit union activities.

The primary function of the dividends on member savings is to encourage members to invest more of their own savings in the credit union, further augmenting the credit union's fund of working capital and thus allowing it to further expand the scope of its lending services. In addition, members are encouraged to voluntarily increase the level of their invested savings to better serve their fellow members.

3. Financing of Additional Services in Rural Areas

Many credit unions, located in rural areas of the developing world, supply a number of additional services to their membership to help complement the effectiveness of the credit provided. For example, in Paraguay, small farmer members receive agricultural technical assistance, input supply and marketing services along with their loan. The purpose of these complementary services is to enhance the productiveness of the loan, thus increasing the farmers' return and hence encouraging them to invest a greater amount of their savings in the credit union.

The costs of providing these additional services, however, is high. Credit unions have been moderately successful in getting local government agencies, such as extension services, marketing organizations and input supply organizations, to work with them and provide some of the services and costs. Nonetheless, most have discovered that it has been necessary to hire their own people to help coordinate these outside services and transfer the necessary information to their membership. In the simplest of cases this might necessitate only the hiring of a part-time paid manager to coordinate the additional functions. However, in situations where additional support is required, it might necessitate the hiring of several full-time employees such as a manager, warehouse clerk and agricultural field worker.

Credit unions have used a number of different mechanisms to finance these additional costs: by requiring that members who receive specialized agricultural training pay a fee to help defray the costs of the service, by operating input supply, marketing, consumer and other services at a margin sufficient to cover the handling and processing costs, and lastly by increasing the rate of interest on member loans or reducing the level of dividends provided on savings.

4. Role of the National Associations

Generally local credit unions lack the necessary technical and financial resources to provide all of the services required and, therefore, must rely on additional support from their national associations. These national units basically function as secondary-level credit union institutions. They operate in a fashion identical to the credit unions, with the only difference being that their members

are credit unions instead of individuals.

The national associations provide an important linkage function in the overall service structure. Essentially they provide credit unions with three types of additional services: the creation of a second fund of working capital financed by member credit union resources which can be loaned to needy credit unions suffering a temporary shortage of loanable funds; the technical training and organizational support for the credit unions' own services at the national level; and, finally, the creation of a financial mechanism through which externally provided development resources can be channelled down through to the local level.

In the majority of cases in Latin America, credit union national associations' support activities are financed in three ways: (1) through annual dues income received from their member credit unions, the dues rate being based on size of the credit union's membership, its assets or loan volume; (2) through administrative and training fees charged to credit unions for services; and (3) through the interest unions earned from the lending of their own capital to member credit unions or from the re-lending of externally-provided capital from non credit union sources.

It has been our experience that the "road to self-sufficiency" for the national assocations has been a long and difficult one to travel and normally requires considerable grant and loan support for a number of years.

BIBLIOGRAPHY

OF THOSE SOURCES CONSULTED, THE FOLLOWING WERE FOUND USEFUL:

Ahmed, Manzoor, and Philip H. Coombs, eds. Education for Rural Development: Case Studies for Planners. Praeger Special Studies. New York, 1975.

Anderson, J.E. Organization and Financing of Self-Help Education in Kenya. Specific case studies. UNESCO/IIEP: Paris, 1973.

Ariyaratne, A.T. A People's Movement Takes Hold, Sri Lankan Village Development.

Balmaceda, Carmen, and Johanna Filp, Patricia Gimeno and Howard Richards. "Parents Help to Educate Their Children: An Experiment in Chile." Prospects, Vol. VII, No. 4, 1977, pp. 557-564.

Batten, Thomas R. Communities and Their Development. Oxford University Press. London, 1957.

Batten, Thomas R. The Non-Directive Approach in Group and Community Work. Oxford University Press. London, 1967.

Bouman, F.J.A. "Indigenous Savings and Credit Societies in the Third World." Development Digest, Vol. XVI, No. 3, July 1978, pp. 36-47

Callaway, Archibald, and Alighiero Musone. Financing of Education in Nigeria. African Research Monograph 15, UNESCO/IIEP: Paris, 1968.

Charlick, Robert. Induced Participation in Nigerian Modernization: The Case of Matameye County. Cleveland State University, (mimeo.).

Chau, Ta Ngoc. Population Growth and Costs of Education in Developing Countries. UNESCO/IIEP: Paris, 1972.

Choldin, Harvey M. "An Organizational Analysis of Rural Development Projects at Comilla, East Pakistan." Economic Development and Cultural Change, Vol. 20, No. 4, July 1972, pp. 671-690.

Cliffe, Lionel, and John Saul. Socialism in Tanzania - Ujamaa Villages. Dar es Salaam, 1972.

Cremin, Lawrence. The American Common School: An Historic Conception. Columbia University. New York, 1951.

Cremin, Lawrence. The Genius of American Education. University of Pittsburgh Press. Pittsburgh, 1965.

Elkan, Walter. "Out-of-School Education for Rural Kenya." Development Digest, Vol. XI, No. 1, January 1973.

Fafunwa, A. Babs."School is Other People." UNESCO Courier, May 1978, pp. 10-14.

Foster, Philip, and James R. Sheffield, eds. Education and Rural Development, The World Year Book of Education, 1974. Evans Brothers Limited. London, 1973

Gueye, Khady. "Day Nurseries in Senegal." Development Digest, Vol. III, No. 4, 1977, pp. 565-569

Haliman, Arif. Community Development Through Primary Health Care: The Banjarnegara, Regional Health Service, Banjarnegara, Indonesia (mimeo.).

Hallak, Jacques. Financial Aspects of First-Level Education Iran. Specific case studies, UNESCO/IIEP: Paris, 1972.

Hallak, Jacques. Financing and Educational Policy in Sri Lanka. Country case studies 1, UNESCO/IIEP: Paris, 1972.

Handler, Richard. "Self-Help in Action." War on Hunger, a report from AID November 1977.

Hannum, Wallace H., and Robert M. Morgan. The Use of Peer Tutoring and Programmed Radio Instruction - Viable Alternatives in Education. UNESCO, 1974.

Haque, Wahidul, Niranjan Mehta, Aninsur Rahman, and Ponna Wignaraja. "Toward a Theory of Rural Development." Development Dialogue, 1977, No. 2, the Comilla experiment, pp. 89-103.

Harik, Iliya F. Decentralization and Development in Rural Egypt: A Description and Assessment. Prepared for USAID, Egypt, October 1977.

Hill, Polly. Population, Prosperity and Poverty (Nigeria). Cambridge University Press. Cambridge, 1977.

Horton, Douglas Earl. Haciendas and Cooperatives - A study of estate organization, land reform and new reform enterprises in Peru. Cornell University, 1976.

Hulpin, Mats, and Jean Pierre Jollade. Costing and Financing Education in LDCs: Current Issues. World Bank, Staff Working Paper No. 216. May 1975, p. 19.

Keller, Edmond J. "Harambee! Educational Policy, Inequality, and Political Economy of Rural Community Self-Help in Kenya." Journal of African Studies, African Studies Center, UCLA, Spring 1977.

King, Kenneth, ed. Education and Community in Africa. Centre of African Studies, Proceedings of a seminar, 18-20 June 1976. University of Edinburgh.

Kouyate, Maurice. "The Teacher Shortage and Peer Teaching in Africa." Viewpoints and Controversies.

LaBelle, Thomas. Education and Development: Latin America and the Caribbean. UCLA Press. Los Angeles, 1972.

LaBelle, Thomas. Educational Alternatives in Latin America. UCLA Press. Los Angeles, 1975.

Lele, Uma. The Design of Rural Development: Lessons from Africa. World Bank/Johns Hopkins University Press. Baltimore, 1975.

Lewis, Noel. "Working for the Village: An Interview with Raphael Oraka." Development Dialogue, 1977, No. 1, pp. 50-63

Luykx, Nicolaas. The Comilla Project, East Pakistan. Department of Agricultural Economics, Michigan State University, October 1969.

McClymont, G. L. Formal Education and Rural Development. Food and Agriculture Organization of the United Nations, Rome, 1975.

Masoka, Kimenga. "What's in a Game? How the Children of Zaire Play to Learn." UNESCO Courier, May 1978, pp. 16-17.

Mayfield, James B. "The Budgetary System in the Arab Republic of Egypt: Its Role in Local Government." Development, University of Utah, August 1977, prepared for the Agency for International Development, Washington, D.C.

Melson, Robert, and Howard Wolpe. Nigeria: Modernization and the Politics of Communalism. Michigan State University. East Lansing, 1971.

Moulton, Jeanne Marie. Animation Rurale: Education for Rural Development. University of Massachusetts. Amherst, 197[illegible].

Murerwa, Muchemwa. Non-Formal Education and Work: A General Perspective, and the Case of the Botswana Brigades. Paper no. 8, Center for Studies in Education and Development, Harvard Graduate School of Education, September 1978, (prepared for USAID).

Niehoff, Richard O. Non-Formal Education and the Rural Poor. Michigan State University. East Lansing, 1977.

Orata, Pedro. Self-Help Barrio High Schools. SEAMEO, Regional Center for Educational Innovation and Technology, Singapore, 1972.

Orata, Pedro T., and Eleuterio S. Sabado. Piglet Project Plan Revised. Barangay (Barrio) Education Bulletin #15, March 30, 1976.

Orivel, F., and J.C. Eicher. L'Evolution des dépenses publiques d'éducation dans le monde, 1960-1974. Institute de Recherche sur l'Economie de l'Education, Université de Dijon, France, January 1978

Rundell, William, and others. "El Quetzal, the Central Marketing Cooperative," World Neighbors In Action, Vol. 10, No. 4E, Oklahoma City, 1978.

Sanger, Clyde. Project Impact. International Development Research Centre, Ottawa, Canada, 1977.

Santiago, Irene M. Katiwala. A Cycle publication, New York, 1977.

Schramm, Wilbur, and Daniel Lerner, eds. Communication and Change: The Last Ten Years - and the Next. University of Hawaii Press. Honolulu, 1976.

Sheffield, James R., and Victor P. Diejomaoh. Non-Formal Education in African Development. African American Institute. New York, 1972.

Sheffield, James R. "Education, Technology, and Development." World Education Reports, No. 12, June 1976, pp. 8-10.

Sheffield, James R., and Victor P. Diejomaoh. "Brigade Training in Botswana." Development Digest, Vol. XI, No. 1, January 1973, pp. 57-63.

Sommer, John, Pratima Kale, and Ranjit Gupta, eds. Rural Development at the Grassroots: The Catalyst Role. Ford Foundation. New Delhi, 1974.

Stevens, Robert D. Rural Development Programs for Adaptation from Comilla, Bangladesh. Department of Agricultural Economics, Michigan State University, April 1975.

Van Rensburg, Patrick. Report from Swaneng Hill, Education and Employment in an African Country. The Dag Hammarskjold Foundation, Uppala, 1974.

OTHER DOCUMENTS:

"Basic Services for Children: A Combining Search for Learning Priorities," a study prepared for the International Educational Reporting Service. Experiments and Innovations in Education, No. 36, UNESCO, Paris, 1978.

China's People's Agricultural Communes. FAO's Action for Development #98, 1974-75.

Development Decentralization I Project (Egypt). AID Project Authorization, 263-0021, March 1978.

Education in a Rural Environment. UNESCO. Paris, 1974

Educational Reforms and Innovations in Africa. The Conference of the Ministers of Education, African Member States. UNESCO. Paris, 1978.

"An Experiment in the Ruralization of Education: IPAR and the Cameroonian Reform." Experiments in Innovations in Education, No. 8., UNESCO, Paris, 1974.

"Historical Aspects of Education in French-speaking Africa and the Question of Development." Development Dialogue, No. 2, 1974, pp. 46-69.

Kaira Rural Development Project. National Dairy Development Board, Ford Foundation Grant (mimeo).

Kiambu, Institute of Science and Technology, Kiambu Institute, Kiambu, 1978.

Liberia, Improved Efficiency of Learning. An AID project paper, 669-0130, April 27, 1978.

"The 1974 Dar es Salasm IDS/Dag Hammarskjold Seminar on Education and Training and Alternatives in Education in African Countries." Development Dialogue, No. 2, 1974 (4 articles).

Rural Development Project-ORDEV, Full Report of the Identification Mission. Rural Development Division, Agriculture and Rural Development Department, Ministry of Local Government, Egypt, April, 1978.

School Improvement Programmes and Community Support, Tamil Nadu, India, Inventory of Educational Innovations in Asia, Asian Centre of Educational Innovation for Development, 1975.

"Les strategies d'integration des systèmes économiques et scolaires dans les pays africains." Recherche Pedagogie et Culture, Septembre-Octobre 1978.

Use of Community Resources in Providing Low-Cost Primary Education. (A Regional Seminar) Innotech. Saigon. November 1973.

ORGANIZATIONS CONSULTED

African Bibliographic Center, Washington, D.C.
Agency for International Development, Washington, D.C.
Agricultural Cooperative Development Institute, New York.
CARE, Washington, D.C.
Center for International Education, University of Massachusetts, Amherst.
Cooperative League of the USA (CLUSA) Washington, D.C.
Credit Unions National Association (CUNA) - Global Projects - Washington, D.C.
Development Digest, Washington, D.C.
Ford Foundation, New York
Inter-American Foundation, Rosslyn, Virginia
International Council of Educational Development, Essex, Connecticut
International Development Research Center, Ottawa
Innotech/SEAMO, Singapore
Land Tenure Center, Madison, Wisconsin
Michigan State - Institute for International Studies, East Lansing
Mott Foundation, Flint, Michigan
National Council of Churches/Div. of Overseas Ministries, New York
Organization of American States/Education Section, Washington, D.C.
Overseas Liaison Committee/American Council on Education, Washington, D.C.
Peace Corps, Washington, D.C.
Rockefeller Foundation, New York
Rural Development Network, Washignton, D.C.
Sahel Documentation Center, Michigan State, East Lansing, Michigan
The Institute of Cultural Affairs, Chicago
UNESCO/Asia, Bangkok
UNESCO/Co-operative Action, Paris
UNICEF, Geneva
USDA, Washington, D.C.
World Bank, Washington, D.C.
World Education, New York
World Neighbors, Oklahoma City

DATA BANKS:

AID Projects	Dissertation Abst.	Socio. Abst.
CAB	ERIC	SocSciSearch
CAIN	NTIS	